

ATARI

VOLUME 4
Jan. 1992

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INTERFACE

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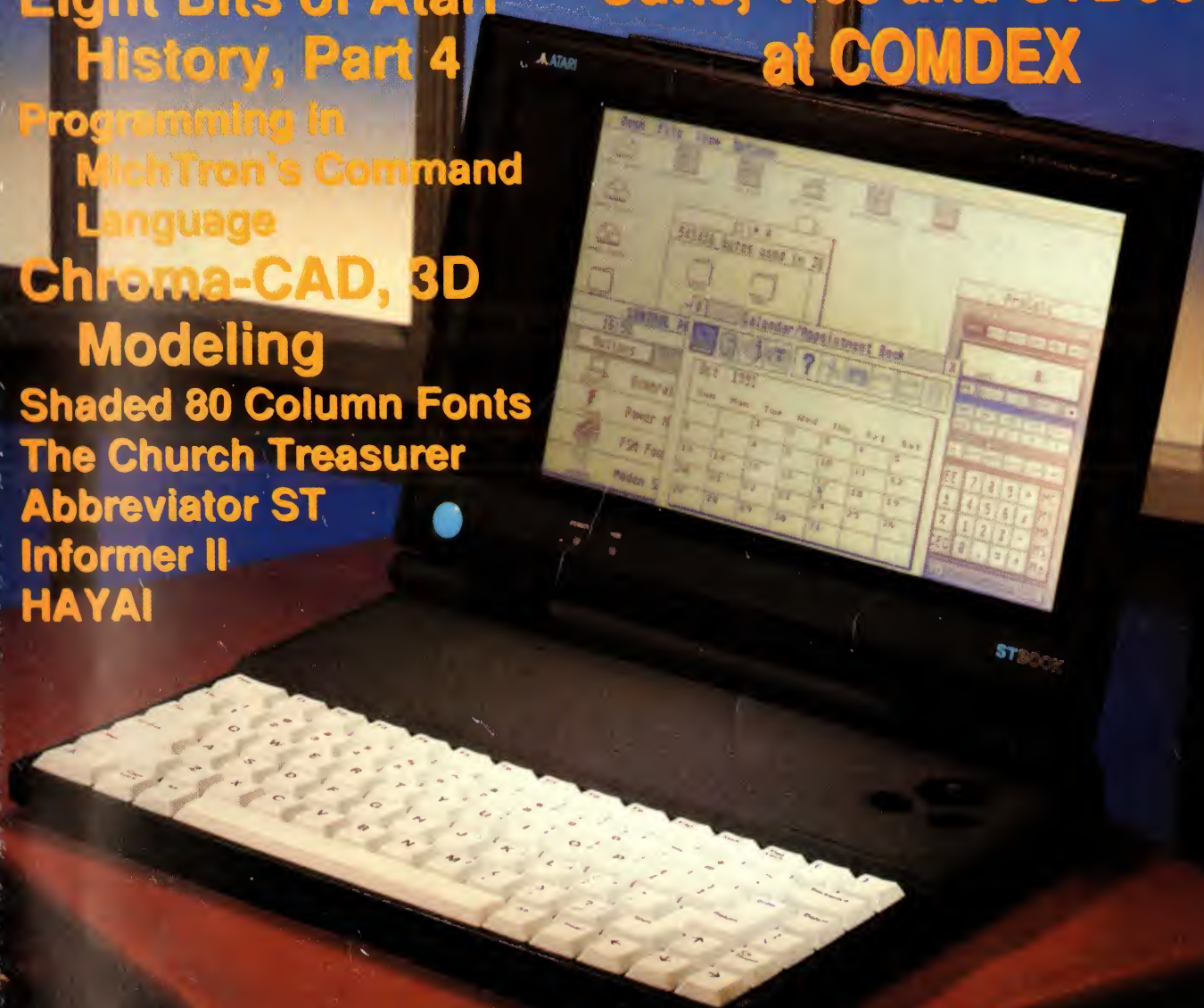
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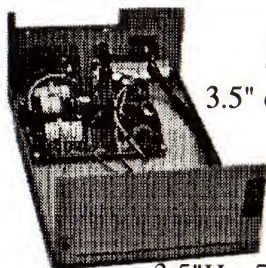
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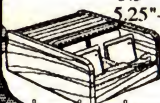
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On the Cover

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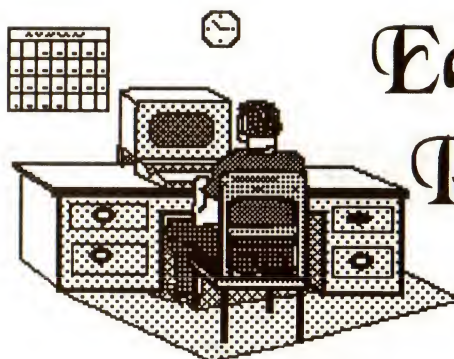
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Editorial Ramblings

Happy New Year!

Our hopes go out to everyone for a pleasant and prosperous New Year. We hope the holiday season was a safe and happy one. Thank you to everyone who's supported AIM over the past year.

The end of one year and the start of another would be a good time to send in that Shareware contribution to your favorite Shareware author(s). Remember, supporting them supports your Atari computer. Your hardware investment is worthless without software to run on it. Shareware authors ask for payments of only fractions of what this software would cost if marketed commercially.

Because of an overwhelming amount of submissions for this issue (and a lack of time because of the Chicago Show), we've postponed for an issue or two reviews of several DTP-related packages. Look for our report on the Chicago ComputerFest by Atari in the February issue along with reviews of several Gribnif packages.

The Chicago Show was the last Atari show for the year, but there are rumors of a show in the spring in Toronto, Ontario, Canada. The turnout at Chicago was very good—about 2,400. LCACE's Mike Brown and Atari's Bob Brodie and Bill Rehbock did an excellent job with this show. Hopefully, the fine job done by Atari and LCACE will encourage more combined efforts in the future.

With the start of a new year, many readers' subscriptions may be expiring. Please check your mailing label. If there is a two or three on it, you're about to expire. Remember that the post office doesn't automatically forward third class mail. This means, if you move, the post office will throw your issues away unless you fill out a form saying you'll pay to have your 3rd class mail forwarded or you notify us *before* the next issue gets sent to you. We can't be responsible for missed issues due to a change of address.

Bill & Pattie Rayl

From The Reader's Viewpoint



Dear Editors,

There are a couple of fascinating articles in the November AIM. One was Chuck Steinman's proposed new 8-bit motherboards. He makes them sound darn good.

It might have helped if he had included some parameters to the numbers included in his comparison table on page 27. Looking at it as is, I instinctively drew the conclusion that whatever a 65816 was, the 68000 was four times better because the 65816 rated only a 2 on some test while the 68000 rated an 8. If he'd mentioned these numbers were units of time, then I would have read the chart correctly. It does amaze me that an 8-bit chip might run faster than a 16-bit chip.

It's surprising in this day and age to see someone involved with a homebrew computer. There are so many ready-to-run boxes around, it hardly seems worth the bother to design, the cost to build or all the software to write. I have heard of one other homebrew computer. It's in Australia. It's called the Appliz, based on the 68000 chip.

I have no idea what that computer is like—certainly short on software. But, it does make me wonder what could be done differently to the ST to make it an optimized 68000 platform.

Looking at the STEs and Mega/STEs that Atari has introduced in the past year, I'm struck more by how little has been changed to those machines.

A switch to SIMMs and improved color and sound doesn't really amount to much. The Mega/STE with 16 MHz clock and built-in LAN port is more of an improvement.

What Atari really needs is a redesign of their MMU to break through the current 4Meg limit on RAM. In today's world of high-

end applications, 4 megs is nothing. Even the TT's 8Meg of RAM is not much when one is working on video or computer graphics or animations.

An MMU that would allow the 68000 to address all the memory locations possibly combined with a switch to faster 16 or 20 MHz CPUs would allow Atari to bring to market a machine big enough for today's business needs while using the more affordable 68000 chip. A 16Meg ST with 20 MHz chip and TOS 2.0x—now *that* would have made for an Enhanced ST!

The other interesting article was David Plotkin's, where he mentions that the developers of the Video Toaster have taken to packaging their product with an Amiga in a case without the Amiga logo.

It's sad that even Amiga suffers the Brand Name resistance problem Atari does. Though, curiously, I get a smug feeling about this. For all Amiga's apparent distancing of Atari as the alternative-alternative computer, they're still in the same hole as Atari.

But this brings to mind something I saw once for the Amiga—a box that sort of engulfed their bottom line model 500 and converted it to an Amiga 2000. I'm not at all sure what was in that box, but undoubtedly it included a hard drive, maybe a second floppy drive and an expansion port for the IBM emulator.

I can see where are Mega converted box for the ST would be pretty handy too. Dave Small's MegaTalk board apparently won't fit inside an ST, nor will his SST replacement motherboard. And, there are a lot of new video cards out, but the ST has no expansion slot for them.

A case that could combine a hard drive, possibly a second floppy and six or eight expansion

slots—say four PC, two VME and two Mega standard—would clear away the clutter of external drives, external modems and external PC emulators. This would be a boon to those of us who don't have a lot of desk space to begin with, but also would grant the ST the kind of flexibility and expandability it needs if it wants to avoid joining the Sinclair in your closet of use-less computers.

Regards,
Brian Earl Brown
Detroit, MI

[Editors: The numbers presented by Chuck Stienman for the 65816/68000 comparison were actually clock cycles, which can be referred to as "units of time" for simplicity. The 65816 is actually an 8MHz 16-Bit chip that has a 6502-compatible mode.]

As for memory, Atari currently has a 16Meg TT RAM upgrade board, and GESoft sells TT RAM boards allowing up to 42 Megs of addressable ST and TT RAM. The TT is definitely not limited to 8Megs.

Finally, on the subject of new cases, there are already a number of options available. Tech-Specialities of Houston, TX sells a tower case designed to hold both an ST and IBM motherboard, with peripheral sharing possible.

For more details, please see the Tech-Specialities ad located in this issue, or call them at (713) 691-7009. Tech-Specialities has a very extensive product catalog. This may be requested by writing 909 W. Crosstimbers St, Houston, TX 77022.

A company in the UK called The Atari Workshop had a tower case available for the ST as long as a year ago. Called the Tower Power, this case could hold an ST motherboard, up to three floppy or hard drives and more. The Atari Workshop, Units 2&19, Sumner Workshops, Sumner Rd, London, SE15 6LA, 071-708-5755.]



ATARI BULLETIN BOARD

Lots of news to cover this month, and on a tight schedule, too! The Chicago Computefest by Atari has just ended with a respectable attendance figure of 2,300. There was a lot to see at the show. Look for a full show report next issue.

Atari's presence at the show was spectacular. Bob Brodie and Bill Rehbock, along with the 20+ other employees from Atari US and Canada, should be highly commended for their efforts. (We'll try to get all their names into the show report!)

This month's Bulletin Board will focus on the new product announcements/shipments from Atari Corp. There just isn't enough time to detail all the news from developers, so we'll have to save that for next issue.

STe Bundles!

Just in time for the holiday season, Atari has released a couple of system packages. The Discovery Xtra bundle includes a 520STe; SC1224 color monitor; a "Starter Pack" consisting of NeoChrome, a BASIC language and a system tutorial program; and four games including the best selling SimCity, Final Flight, Nine Lives and Escotere. In all, the package would cost around \$1,000 if purchased individually, but Atari's retail price is around \$600!

The new Family Curriculum bundle includes 1040STe, color monitor, and a variety of "mod-

ules"—Play and Learn module and Junior High (educational software), Computing module (word processor, spreadsheet and database) and Family Activity module (paint program, BASIC language and music software).

Total retail for the individual software packages and system is well over \$1200. The package from Atari has a suggested retail of under \$700.

Lynx Deluxe Pack

The new Lynx II Deluxe package was also available at the Chicago show, at a suggested list price of \$149. The package is, basically, the same as the original package, with California Games, ComLynx cable and power adapter. The only addition is a Lynx carrying pouch. Purchasing all these items separately would cost around \$170.

STBook

Shipment of the STBook notebook-size ST is expected in late January or early February '92. One of us (Bill) had the opportunity to "play around" with the STBook at the Chicago show.

Look for a "preview and first impressions" article to accompany the show report next issue. Suggested retail is \$1,995.

ABC 386 Computers

Atari has begun shipping their new IBM compatible 386

line of computers. The ABC 386SXII is a 20MHz 80386SX-based system with 1 MB (expandable to 8 MB) of RAM, 40 MB hard drive, SuperVGA 800x600 video adapter and two 8-bit and four 16-bit ISA expansion slots. Suggested retail is \$1,195.

The top-of-the-line ABC 386 DXII uses a 40MHz Am386 processor (from Advanced Micro Devices), 2 MB of RAM (expandable to 64 MB), 80 MB hard drive, 64K cache RAM (expandable to 256K), SuperVGA 1024x768 video adapter and eight 16-bit and one 32-bit expansion slots. Suggested retail is \$1,995.

Both desktop 386 machines come with 3.5" 1.44MB floppy, 101-key enhanced AT-style keyboard, one parallel and two serial ports, a game/joystick port, MS-DOS 5.0 and Microsoft Windows 3.0.

To fill out the new PC line, there's the ABCN3865SX (also called the PCBook), a notebook size 20MHz machine with 1 MB of RAM (expandable to 5 MB), 3.5" 1.44 MB floppy and optional 60 MB hard drive. The system has a suggested retail price of \$2,895.

For more details on these computers, contact Bill Rehbock of Atari Computer Corp. at (408) 745-2082 voice or (408) 745-2083 FAX.

UNIX

The Atari System V (ASV) Developer's Kit has begun ship-

ping to developers in Alpha test form. Atari's implementation of UNIX is based on System V Release 4.0. The interface is based on XWindows 11.4 and OSF/Motif 1.1.2. The UNIX package includes XFaceMaker 2, WISH2 Desktop Manager, GNU C and C++ compilers, GNU gdb debugger, AT&T System V sdb debugger and a networking package.

Included in the developer's kit documentation are user guides for WISH2, Wx2 and XFaceMaker, Atari's System V Developer's Guide and the Atari Style Guide, an enhancement to the Motif style.

The TT030 ASV workstation requires a minimum of 8 MB of RAM, a 213 MB hard drive and TTM195 19" monochrome monitor. The full developer's kit comes with TT030 with MC68882 math coprocessor, 2 MB ST RAM and 16 MB TT Fast RAM, a 3-button mouse, TTM195 and choice of 200 or 340 MB hard drive.

For additional details, contact Art Pruzynski, Atari's System V Marketing Manager, at (408) 745-2172 voice or (408) 745-2088 FAX.

ST/STE/TT Docs

According to UK sources on Usenet, Atari UK has released Atari's ST/STE/TT Developer documentation in the form of four books, now available for purchase by the general public.

Book 1, *Programming Guides GEMDOS/BIOS and General Programming*, contains 238 pages at a price of £29.99.

The book includes the GEMDOS Reference Manual, pexec Cookbook, Hitchiker's Guide to the BIOS, AHDI, Still Another Line A Document (SALAD), Intelligent Keyboard Protocol, CHKDSK3 docs, and MIDI Associate Address Sheet.

Book 2, *Programming Guides—New Machines*, is 184 pages including the Rainbow TOS Release Notes, STE Developer's Addendum, STE TOS Release Notes, TT030 TOS Release Notes, TT030 Hardware Reference Manual, and VME Expansion for TT and MEga STe.

The book includes two disks of utilities, examples, XControl extensible control panel and docs for £29.99.

Book 3 is actually a combination of two books: *Programming Guides—GEM VDI* and *Programming Guides—GEM AES*. The combined set is 514 pages and costs £49.99.

The last book is called *Hardware and Chip Specs* (228 pages, £29.99) and contains engineering hardware specs for ACSI, MC6850, 68901, ay3-8910, wd1770, Blitter chip, monitors and cartridge

port. Schematics are included. Books 1-3 are available as a set for £99.99. For more details, contact:

Atari UK Software Support
Atari, Atari House
Railway Terrace
Slough, BERKS
United Kingdom SL2 5BZ
Telephone: 0753 533344.

MetaDOS Release

Atari has decided not to release their CDAR-505 CD-ROM drive since users can currently buy the same drive (a Chinon CDX451) at a cheaper price than Atari could deliver, according to Bill Rehbock. Instead, Atari is releasing MetaDOS, Atari's CD-ROM driver software, to the general public as Freeware.

Using MetaDOS, any Atari owner could purchase their own CD-ROM drive and connect it to the TT's SCSI port or to any ST via an ICD host adaptor (call ICD for details on CD-ROM drives being supported by their software).

With Chinon CDX451 drives selling at under \$400 from a number of sources, these drives are well within the price range of many users.

FSM GDOS

As of mid-December, FSM GDOS should be available from your local dealer at a suggested retail of \$59.95. FSM GDOS supports scalable fonts, rotation of fonts and lots more. Best of all, FSM GDOS is *much* faster than Atari's original GDOS.

A number of fonts are included in the package, as are printer drivers for:

DeskJet 500, HP LaserJet, HP PaintJet, Epson FX80, Star NB15 and NX1000, NEC P-series, Okidata 120, Atari SLM804/605 and SMM804, and Canon BubbleJet.

Santa Says:

Stuff your stockings with clip-art from ESG! Spruce up next year's flyers and newsletters ordering IMG or vector clip-art! Now is the time to buy! IMG disks are only

\$4.00 each, IMG Volumes \$15.00! Vector clip-art comes in CVG (Calamus), GEM/3 and ascii-EPS formats (EPS files require Postscript printer), and start as low as \$15.00. To learn more about ESG's clip-art, write and ask for the free catalog, which describes each of the over 200 IMG disks and over 35 IMG volumes.

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Right on Target



David Plotkin
Contributing Editor

**So maybe,
just maybe,
selling Ataris
mail-order is
a good idea.
Of course,
the places
that sell the
machines
would need
to be able
to answer
questions...**

Every month, I get a magazine called "Computer Shopper." It is huge—usually over 1.5 inches thick. It contains very little in the way of editorial, though what there is is usually of pretty high quality. So what do they fill the rest of this massive magazine with? In short, advertisements.

You see, Computer Shopper is a magazine dedicated to the mail-order market for computers and computer accessories. In its pages, you can buy everything from fully configured 486 computers, hard drives, monitors and printers down to cables, plugs and memory chips. There are literally hundreds of advertisers who appear in the pages of Computer Shopper month after month.

How Is This Possible?

What you have to ask yourself is how do they do it? How can companies sell so much stuff that it pays them to advertise every month? Especially when you consider that the prices charged are considerably below what you'd pay in a retail store. The answer, of course, is the large size of the PC and Mac markets (the bulk of the ads are for equipment to service these two markets).

Mail order has always been cheaper than buying in a retail store, which has produced some hard times for computer stores. For one thing, mail order operations don't need to support expensive store fronts with salaried salespeople, and all the overhead that goes with that. They tend to be warehouse operations with a lot of phone lines, where most of the employees need only have enough skill and training to take orders.

There should, of course, be people around who can answer technical questions about the merchandise, but there isn't always. Further, prices can be cheaper because, if you do business with an out-of-state firm, you do not need to

pay sales tax. You *do* pay shipping, but often that ends up being less than sales tax, especially in states like California (where I live).

Give and Take

What you trade away for those lower prices is some of your security. You can't walk in and try the merchandise, and you can't bring it back and trade it in if it's defective. If there is something wrong, you must call the mail order firm, ship the equipment back to them (often at your cost) and wait until the new equipment is shipped back to you.

Of course, there is no guarantee that a store you do business with will have a replacement in stock—in these days of small inventories, they often have to order a replacement themselves, leaving you in the same predicament.

And, of course, it's not always easy to get questions answered or repairs done when the firm is many states away. Finally, a small percentage of mail-order firms are crooked—they take your money and disappear before any goods are delivered (which is why it is best to use a credit card when buying mail order).

Atari and Mail Order

You *can* buy third party equipment and software for Atari computers via mail order. It used to be that you could buy Atari equipment mail order. Then Atari cracked down to try and protect their shrinking network of dealers.

While the lack of mail-order Atari equipment did little to protect the dealers, it did make that equipment harder to get (many locations don't have a dealer within a reasonable distance) and more expensive.

As Atari equipment fades ever further from the mainstream, you have to ask yourself if a massive mail-order setup might not be their last hope. It has

the possibility to move a lot of machines (provided that Atari can build the machines, something I'm still not clear on) by making them cheaper and easier to find.

There is a precedence for fairly sizable computer companies making their wares available exclusively by mail-order. A whole host of PC companies, including such notables as Dell, Northgate and Austin are only available mail-order. They have well-staffed phone lines with knowledgeable people, and even manage to provide fast turnaround on their servicing.

Some companies contract with service companies such as GE or Honeywell so that if something goes wrong, a serviceman shows up on your doorstep, or you can take the machine to a nearby service center. Servicing your computer becomes as commonplace as servicing your washing machine or TV.

One of the pluses for Atari allowing its computers to be sold mail-order is that their dealers could become mail-order suppliers, delivering machines and competing in markets far-removed from their storefronts. The need to advertise would bring in more business for the (also shrinking) Atari magazine market. Purchasers of computers need disk drives, software, hard drives, printers, monitors and accessories, so a considerable amount of additional advertising would appear to get the word out.

Bringing Good Things to Life

Atari is negotiating with GE to have them service Atari computers. This would be a good thing on its own, and would give a real boost to the notion of mail-order Atari computers. All but the smallest towns have a GE service center nearby. My own company has their PCs serviced by GE, and the service is fast, efficient and professional. They always seem to have the right parts—these guys really know what they are doing. If an Atari computer could be serviced that efficiently, one of the major obstacles to purchasing one would be removed.

So maybe, just maybe, selling Ataris mail-order is a good idea. Of course, the places that sell the machines would need to be able to answer questions and set up service calls, just as the PC mail-order houses do.

I've said this before and I'll say it again: Atari needs to get more machines sold and build their user base, or 1992 may be the end of it.

Atari's most powerful advertising has been their users, who are loyal almost to the point of being fanatical. As this group grows smaller, their ability to influence others also shrinks—starting a spiral that spins itself into nothing. On the other hand, an expanding user base spirals ever upward, drawing more and more people into its orbit.

Now *there's* a happy thought. See you next month.

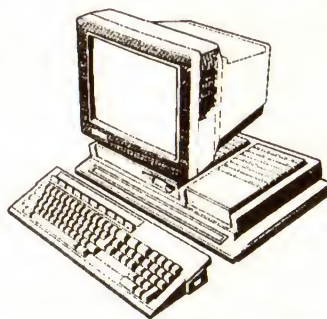


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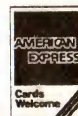
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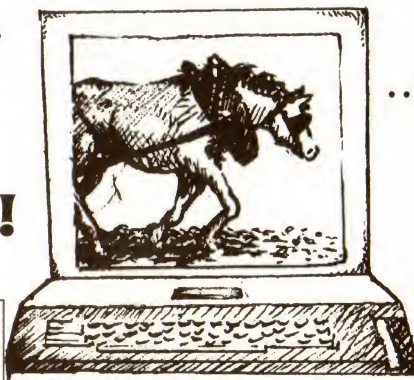
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Eight Bits of Atari History, Part 4 or The Way It Might Have Been

In this installment, we'll look at Atari's performance in the video game marketplace.

Atari Still Video Game King!

The appearance of IBM's PC in 1981 may have validated the personal computer to corporate America, but it also marked the beginning of fresh turmoil.

The firm which stood to lose the most because of IBM was Apple, for both companies had set their sights on the high-end market and the business world. It did not take long for IBM to overtake Apple's lead. By the end of 1983, Big Blue commanded about one-third of the market and had displaced Apple as the industry leader.

The year had begun well for Apple with John Sculley coming from Pepsi to replace Mike Scott, who had left in 1981. The Lisa and the Apple //e were both introduced that year. For a while, Apple's stock soared.

Then, just as was happening with videogames, the entire market began to sour. There was a recession on. Also, people were becoming fed-up with the glut of lousy games cranked out by greedy

companies, and people were confused by the hyperbole spouted by competing computer brands.

The industry needed a cooling-out period, and the consumer waited for the marketplace to settle down, for the options to become a bit clearer.

Though Apple did \$983 million in sales for 1983, it also suffered its first quarterly drop in profits, and its stock fell from a high of \$63 to a low of \$17. When the Lisa failed to crack the office market, it became clear that Apple's future rested with the Macintosh, even though Apple II sales remained surprisingly strong.

But, after a glitzy launch in 1984 and strong early sales, the Mac stalled. Many observers credit the leadership of John Sculley with keeping the company from going under.

A power struggle developed between Sculley and the increasingly erratic Jobs. It came to a head in 1985, which was to prove the most difficult year of all in Apple's history.

Woz left the company in disgust and sold all his stock. Other key people began to leave the company as well, including Burrell Smith, the principal designer of

the Mac, burnt out by Apple politics and 100-hour work weeks.

Finally, things came to a head between Sculley and Jobs, and Jobs was removed from his position as chairman. Stung to the quick, he resigned. Twelve hundred people were laid off. Morale was very low.

Atari's Troubles

Atari began to unravel a year earlier than Apple. At the time, it was at the peak of its fortunes, with over 10,000 employees worldwide and some 70 buildings in Silicon Valley.

Revenue in 1982 was its highest ever—\$2 billion—but just before the year ended, Warner announced its earnings for the last quarter would not be as high as originally predicted, due to a slump in the videogame market. Immediately, Warner stock lost a third of its value.

In 1983, Atari suffered staggering losses—\$450 million. It laid off 1,700 people and accepted the resignation of Kassar, who was under investigation by the Securities and Exchange Commission for insider trading.

Warner replaced Kas-

Ed Hall
Contributing Editor

sar with James Morgan, a VP from Phillip Morris, a tobacco company. Morgan continued trimming operations, but he couldn't staunch the bleeding quickly enough. Warner Communications had already become the second biggest corporate loser after Chrysler, and it had to get rid of Atari fast. That's when Jack Tramiel arrived in 1984. At last, Atari was back in the hands of someone who knew the business.

Tramiel slashed Atari's bloated corporate structure until only a single building remained, and he concentrated the company's resources on developing the ST computers. This meant abandoning the videogame market, of which Atari still controlled seventy-five percent in 1984.

Tramiel shelved the 7800 game system, which had been unveiled just two months before he took over the company. Though its CPU was the aging 6502, the machine employed a new graphics chip dubbed Maria, which was Atari's first departure from the venerable player-missile system. The result was state-of-the-art graphics. Had the 7800 been released as planned in 1984, Atari might have maintained its market lead. By the time they realized videogames were still a viable product, it was too late.

In 1986, Atari re-introduced the 7800 and brought out the 2600 (VCS) in a new case. In 1987, the XE Game System was released—which was the 65XE computer in a new case—and offered its customers recycled software that was as much as five years old.

These are not the moves that a company makes when trying to corner a market. They are what a company does when trying to pick up crumbs at someone else's dinner table. However, part of Tramiel's business philosophy is that it's often better not to be first into a market, because then you can capitalize on the mistakes of others.

In 1989, Atari made a strong move in the video game market by acquiring the Lynx, a handheld game machine which had been developed by a software company named Epyx. By then, the lead of Nintendo and Sega seemed almost insurmountable. Astonishingly, Atari was no longer videogame king. Ironically, its computers continued to suffer from the image of "game machines."

Postscript: More "Science Fiction" Plots

Steve Jobs, after being ousted from Apple, is now heading up a new company called NeXT, which is producing workstations. One of the first business deals he struck was with his old foe, IBM.

Nolan Bushnell is now working for Commodore.

Warner Brothers still owns a sizeable chunk of Atari.

Apple and IBM recently announced an "alliance" in a bid to counter declining sales.

Annotated Bibliography

1. General

Fire In The Valley: The Making Of The Personal Com-

puter by Paul Freiberger and Michael Swaine. (Osborne/McGraw-Hill: 1984)

This book is a good history of the chaotic early years of the microcomputer industry. Apple, Atari and Commodore are only part of this story. Find out about the other guys, such as IMSAI, Cromemco, and MITS.

Hackers: Heroes Of The Computer Revolution by Steven Levy. (Doubleday: 1984)

Engagingly written, this book brings to life the exuberant adolescence of the microcomputing industry, and has enough oddball characters in it to populate several Donald Westlake novels. You'll read about some of the crazy goings-on in the early days of Sierra On-Line, the company built by programmer Ken Williams and his wife Roberta (author of all those King's Quest adventures). There is an interesting courtroom scene when Atari brought suit against Sierra for copyright infringements on Pac-Man. This book is a must-read.

Silicon Valley Fever: Growth Of High Technology Culture by Everett M. Rogers and Judith K. Larsen. (Basic Books: 1984)

Of the flurry of books about computers which suddenly appeared in 1984, this one is the most dated. It gives a broad picture of life in Silicon Valley, and deals briefly with just about everything—venture capital, espionage, housing, the divorce rate, burnout, women in the industry, how a microprocessor is manufactured, etc. It also gives brief sketches of Apple, Hewlett-Packard, Intel, and assorted personalities.

The Soul Of A New Machine by Tracy Kidder. (Little, Brown: 1981)

This book describes the making of a new model of mini-computer by a group of employees at Data General. Despite its title, the book's focus is on the people rather than the machine. Although it has nothing to do with Atari or personal computers, it's worth reading for the insight it gives into the enormous personal cost required to produce a computer. Steve Jobs will look like less of an ogre after you read this book (which, incidentally, won a Pulitzer Prize). You'll love the prologue.

2. Apple Computer

Steve Jobs is, according to Jean-Louis Gasse, who eventually replaced him as head of the Macintosh division, "that handsome and tragic character out of some novel, that visionary monster, aesthete, lonely, detestable and fascinating creature." No wonder so many books have been written about him and Apple Computer. The cream of the crop are:

The Little Kingdom: The Private Story Of Apple Computer by Michael Moritz. (William Morrow and Co.: 1984)

Steve Jobs: The Journey Is The Reward by Jeffrey S. Young. (Scott Foresman and Co.: 1988)

West Of Eden: The End Of Innocence At Apple Computer by Frank Rose. (Viking: 1989)

"The Little Kingdom" focuses on Apple's early years and has little on the development of the Lisa and

the Mac. "West of Eden," the most engagingly written of the big three, picks up where "The Little Kingdom" leaves off. "The Journey" is encyclopedic in its detail, and covers the entire period that Steve Jobs was at Apple.

Accidental Millionaire: The Rise And Fall Of Steve Jobs At Apple Computer by Lee Butcher. (Knightridge Publishing Co.: 1990)

The slightest of the books about Apple, it offers little that is new. Read it only if you want a quick potted history of Steve Jobs and the Apple story.

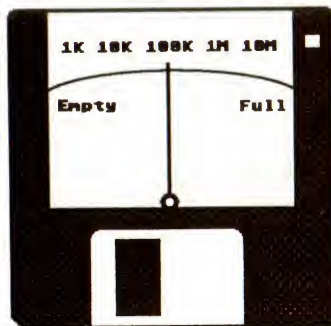
Odyssey: Pepsi To Apple... A Journey Of Adventure, Ideas And The Future by John Sculley with John Byrne. (Stoddart: 1989)

Who is John Sculley? He's the man who got rid of Steve Jobs, and this book was written to expiate that guilt. Is he a skilled corporate hitman? Or a decent, hardworking person who saved Apple from itself? In support of the latter, he offers a picture of himself making a peanut-butter sandwich.

3. Atari and Commodore
Home Computer Wars by Michael Tomczyk. (Compu! Publications: 1984)

This book begins with the author taking home a pre-production Atari computer and playing Star Raiders obsessively for three nights in a row. A week later he quit his job, started learning BASIC and began seeking work in the computer field. Though he subsequently received job offers from both Apple and Atari, he ended up with Commodore. The book is memorable for its portrayal of Jack Tramiel.

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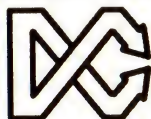
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Hayai (hah-yah-e, accent on second syllable) is a Japanese word for fast, speedy or quick. Hayai is a three-version suite of high speed partition to partition copiers for hard disk to hard disk backup and/or defragmentation.

The manual serves as a reference for all three versions of Hayai. Hayai 512 can be used only with partitions formatted with logical sector sizes equal to 512 bytes. Supra's current hard disk driver requires this version. Hayai 512 will also function with AHDI, Atari's driver, and with ICD drivers if the logical sector sizes of involved partitions are 512 bytes.

Hayai Samesize can be used to copy data between partitions with any logical sector size as long as the logical sector size of each partition is identical to that of the other. Supra's current driver is not compatible with this version of Hayai.

Hayai Diffsize can be used in any situation where Hayai Samesize can be used. However, Hayai Diffsize has been designed to copy data between partitions with differing logical sector sizes. Because the data configuration must be transformed to fit into a new logical sector size, Hayai Diffsize moves data at a slower rate than the other two versions of Hayai.

Main Screen

The screen shot at the top of the following page shows the first screen you see when you enter HAYAI. This particular snapshot shows drives M-O with light shading. This shading indicates those drive letters correspond to removable media partitions (e.g., a SyQuest

*Finally, I can do
my backups and
defragment my
hard drive
without the loss
and degradation
of my data.*

drive). The three buttons at the bottom of the screen initiate the copy and compare functions. These buttons give you the choice of copying one partition to another, comparing two partitions, or designating that a comparison automatically follow a copy.

The lightened drive letters indicate the absence of these partitions from the system configuration; the remaining drive letters indicate the current active non-removable drives on your system.

The drop down menus at the top of the screen are for setting program parameters, accessing dialogs, viewing on-line help menus. Items in the drop down menus can be activated via mouse selection or function keys F1-F5.

For example, *Save Configuration* in the *File* drop-down menu is accessed by moving the mouse arrow selector over the file menu item, or by pressing the F2 key. When you click on *Save Configuration*, all program settings are preserved by writing them to disk. When next the program is executed, *Removable Media partitions*, *Origin partition*, *Destination partition*, *Same Drive* and *Same Partition* selections, and *Filesize/Start Cluster Options* will all be as they were when you last used *Save Configuration*.

The other option, *Quit*, will exit the program without further warning.

Note: Whenever menu boxes are dropped via the function keys, you can select items from the keyboard while the menus are being viewed.

Options

Enable part to part SAME DRIVE permits copying data between partitions on the same drive. This option alleviates

Jerry Enos

Origin Partition

C	D	E	F	G	H	I	J	K	L	M	N
O	P	Q	R	S	T	U	V	W	X	Y	Z

Destination Partition

C	D	E	F	G	H	I	J	K	L	M	N
O	P	Q	R	S	T	U	V	W	X	Y	Z

Copy ^C

Compare ^K

BOTH ^B

Under the current operating system, files are not allowed to reside in cluster 0. But, since certain programs create zero-length files, they do exist. (When the system has a zero-length file, it places a zero in its fat position, signifying the next cluster is in byte zero of the fat table, when in fact there can be no file in the zero cluster.) The zero in a fat location signifies

the tendency to inadvertently copy from partition to partition on the same drive.

Enable cart to cart SAME PARTITION permits copying data between partitions on the same cartridge on removable media drives.

Depending on the item selected, these will deselect all *Origin*, *Destination*, or *Removable Media* buttons.

Filesize/Start Cluster Options will display a dialog of choices for each partition. *Identify Removable Media Partitions* displays a dialog to select removable partitions.

Filesize/Start Cluster Options

This dialog permits keeping or ignoring any files beginning in cluster zero or having a size of zero. Many files with these characteristics are created as a result of an error. In most cases, it is a good idea to remove them from your system.

Hayai gives you the option of keeping (*Retain*) or removing (*Elim*) them because a few programs intentionally create files with these characteristics. These programs will usually just recreate them if they don't exist.

that the cluster is actually free. So as a matter of course, you can see the dilemma involved in the aberrant use of the zero length file.

Removable Media Partitions

For those fortunate enough to own SyQuest removable drives, you can identify partitions on that drive. This option is provided as a convenience to make the program more understandable to those who have such a unit. It doesn't make a difference to Hayai which type of drives are involved in the data transactions.

If you do own a SyQuest, though, Hayai gives you the ability to backup one cartridge to another on a single SyQuest mechanism.

File Length and Start Cluster Options

DRV	FILESIZE = 0		START CL = 0	
C	Elim	Retain	Elim	Retain
D	Elim	Retain	Elim	Retain
E	Elim	Retain	Elim	Retain
F	Elim	Retain	Elim	Retain
G	Elim	Retain	Elim	Retain
H	Elim	Retain	Elim	Retain
I	Elim	Retain	Elim	Retain
J	Elim	Retain	Elim	Retain
K	Elim	Retain	Elim	Retain
L	Elim	Retain	Elim	Retain
M	Elim	Retain	Elim	Retain
N	Elim	Retain	Elim	Retain

DRV	FILESIZE = 0		START CL = 0	
O	Elim	Retain	Elim	Retain
P	Elim	Retain	Elim	Retain
Q	Elim	Retain	Elim	Retain
R	Elim	Retain	Elim	Retain
S	Elim	Retain	Elim	Retain
T	Elim	Retain	Elim	Retain
U	Elim	Retain	Elim	Retain
V	Elim	Retain	Elim	Retain
W	Elim	Retain	Elim	Retain
X	Elim	Retain	Elim	Retain
Y	Elim	Retain	Elim	Retain
Z	Elim	Retain	Elim	Retain

CANCEL ALL ALTERATIONS ^C

EXIT

Help and More Help

The amount of on-screen help is shown by the two selections; *Help* and *More Help*.. All the major (and minor) options in Hayai are covered. Included here are RAM requirements, read and write errors and keyboard codes.

The *Keyboard Codes* in the *More Help* menu describes the keyboard keys used to select menus, partition buttons and the other functions used in Hayai. At anytime during the program, if you want to see these keyboard equivalents, you can just press the Help key.

Program Execution

To use Hayai to backup a drive, a valid *Destination* and *Origin* partition must first be selected. The *Destination* partition must be chosen with care, as any data currently on that partition will be replaced by incoming data.

At the end of the copy procedure, Hayai displays some statistics, based on which options were selected. The *Data Copy Rate* is shown if you selected the *Copy* or the *Both* button, the *Data Compare Rate* is shown for the *Compare* or *Both* button, and the *Copy/Compare Average* is shown if both a compare and copy are performed.

So, a compare can only be performed after a copy, but a copy can always be performed, with or without the compare. The statistics shown in the snapshot below were for a partition to partition transfer on a Quantum 210S hard drive.

Times vary between different drives. Slower times are usually associated with older drives and SyQuest removables. Data transfer rates vary according to the number of kilobytes per second. Using ICD's RATE-HD.PRG, I have recorded rates ranging from 300 to over 1000 kbytes/second. A drive rated at an access time of 22ms usually can expect data transfer rates of over 1000 kbytes/ second.

at a byte location is usually an indicator of hardware problems, such as a bad sector. I had such a problem and managed to fix it with something as simple as a new cable. Thanks to Hayai, I was able to locate the problem before any significant damage evolved.

Conclusion

I believe Hayai to be necessary to anyone who backs up data frequently or to anyone who wants to validate their data. I have two drives; a SyQuest 555 removable and a Maxtor LXT-213S. I use an ICD Host Adapter, with both drives mounted in one case. The two drives are rated at 32ms and 21ms respectively.

Backing up from the hard drive to the SyQuest takes 10 to 15 minutes. My back-ups usually consist of transferring 130 Megabytes from my hard drive to my SyQuest, changing cartridges three times. This is better than the four hours it used to take using floppies. I recommend Hayai for the following reasons:

- Data integrity
- Fast back-ups
- Defragmenting
- Works with both removable and non-removable hard drives
- Can copy between different sized logical sectors

Is Hayai meant for everyone? The answer is: if you have a hard drive or removable drive, then Hayai will increase the efficiency of your system. For the first time, full speed backups and defragmentation can be accomplished without the worry of data loss that has become associated with high speed data transfers.

Comparison Failure

Hopefully, you will not see one of these, but if you do, here are some suggestions. A Comparison Failure is an error report showing the disagreement between two bytes, one on the destination partition and the other on the origin partition. A comparison failure

Desk File Options Help More Help

Partition to Partition Copy/Compare

Origin Partition

C	D	E	F	G	H	I	J	K	L	M	N
O	P	Q	R	S	T	U	V	W	X	Y	Z

Destination Partition

C	D	E	F	G	H	I	J	K	L	M	N
O	P	Q	R	S	T	U	V	W	X	Y	Z

Fixed Drive to Fixed Drive

Cluster Compare Progress

Data Copy Rate:	32.24 megabytes/minute
Data Compare Rate:	14.73 megabytes/minute
Copy/Compare Average:	23.48 megabytes/minute

Copy ^C Compare ^K BOTH ^B

FUTURE of the 8-bit—A Reply

Jerry Bridgman

I was pretty amazed by Chuck Steinman's article "What Does the Future Hold for the Atari 8-bit User?" I expected it to be some fairly lame stuff about hanging in there.

Upgrade Routes

What it turned out to be was a description of two routes to cease being an 8-bit user! (an exclusive 8-bit user anyway.) Don't get me wrong—I am intrigued by the two major projects he is proposing. But I still think it would be well to ask the basic question "Why?"

I mean, we have several routes already available to go up from 8-bits. And if we want to still use our old machines as well, we can just leave them hooked up to our TVs.

This has the advantage that if two people in the household want to use a computer at once, there are two computers to use! Anyway, I don't personally know of any 8-bit software that isn't completely outdone by something on the ST.

There are natural replies to all this: We have a big investment in our present systems; there is no reason why an 8-bit with a meg or two of RAM couldn't run state-of-the-art software, so let's write some; it's time consuming to learn a whole new machine language; there are better, more compatible chips than the Motorola 68000; Atari doesn't advertise, so the ST and its progeny will go down the drain soon, too; there's a lot to dislike about Apple and IBM; the world thrives on diversity, etc.

How 'bout This?

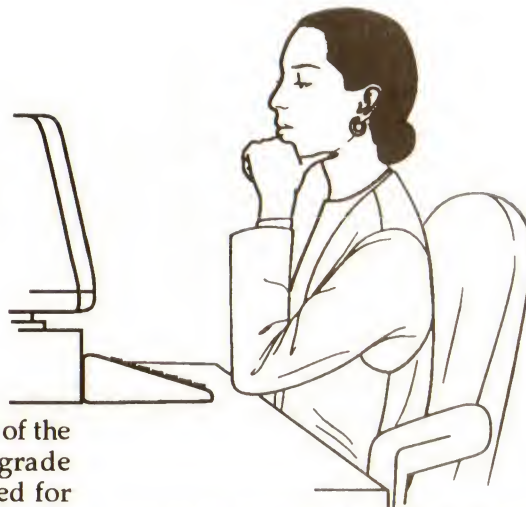
But, if you buy that, what of the following suggestions? Upgrade by using the chips developed for the Lynx. These chips include sound and math co-processing as well as the extremely compatible 65C02 running at twice the speed. Or, we could use Motorola's own math coprocessors which, according to Byte Magazine, are compatible with the 6502.

If I had my choice, I would like to have a chip very similar to the 6502, except capable of running at a much higher clock speed—12 MHz is a gutsy wish I read in an Atari newsletter. (Let it default to 1.79 MHz.) Supplemented with some custom chips, that would keep me happy for a few months anyway!

More to the Point

There is a deeper point to be made here. I have read in a couple of sources that the personal computer revolution has been accompanied by no increase in white collar productivity.

What's enough to drive you crazy is that this fact is simply mentioned without any recognition that this is an odd, if not damning, fact. What it seems to



say is that computers are more expensive than they are worth! Apparently, computers increase productivity on average only enough to pay for the computers! This is, as they say, a poor return on investment.

So maybe we should keep our computers, only upgrading in the most efficient ways. But this only makes sense if there is going to be software.

I await more news from Chuck Steinman.

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3D CAD Modeling on the Atari Classic 8-Bit

Bob Woolley
SLCC

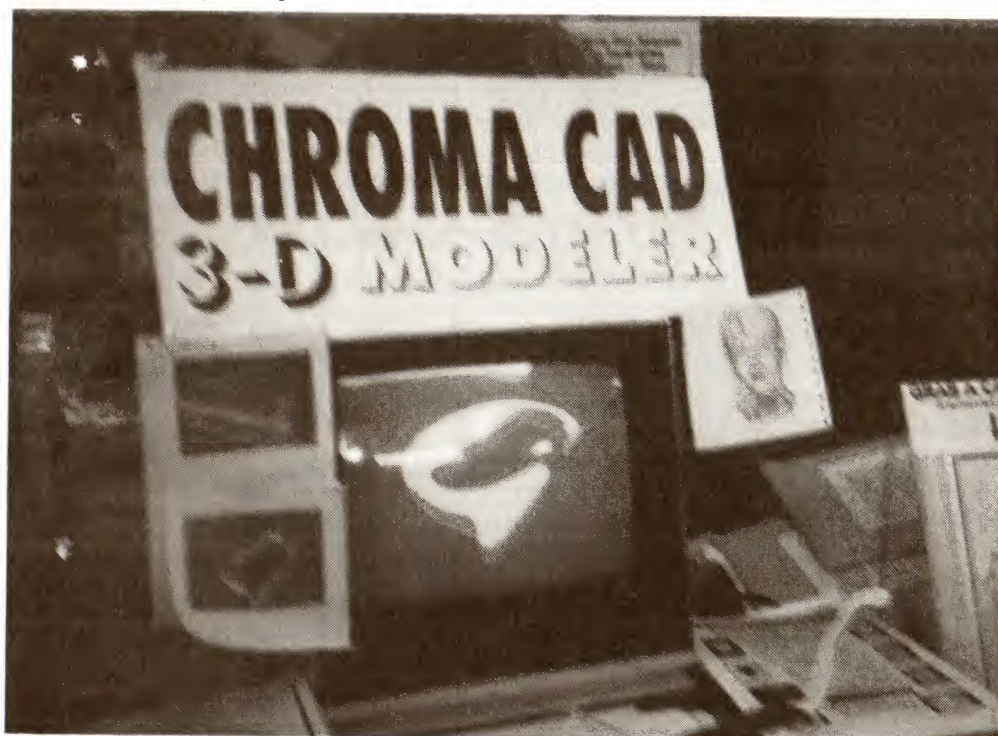
You know what I would like to do on my computer? I want to do one of those bouncing Fuji demos, only with the letters SLCC (San Leandro Computer Club) instead of a Fuji.

You know the demo I'm talking about—the Fuji Boink one, where the Atari Fuji spins and bounces around the screen? They really did a nice job on that one...as the Fuji spins, each surface changes shade according to its orientation towards the incident lighting. And, when it is perpendicular to the viewer, you can see the background through the openings in the Fuji!

On mine, I think I'll have the individual letters rotate at different speeds and at an oblique angle. Maybe once in every two seconds or so, I'll make the letters line up to spell SLCC.... Sound neat? No? OK, so you do your *own* club's letters. Sounds too hard? You aren't an artist with a lot of time on your hands? Neither am I. But, I've got a copy of ChromaCAD.

I am going to refrain from referring to ChromaCAD as an outstanding program "on an 8-bit," since it is really in a class by itself on *any* platform. The producer of ChromaCAD, Marver Seaman, states right in the introduction that he plans to port his creation to "all the more popular 16-bit and 32-bit computers." (When will he have time to sleep? This is a major piece of software!) While it may run faster on the larger machines, the form and function will be preserved across hardware implementations.

So, dust off the old 8-bit and take a facinating trip into the world of solid modeling on your computer. When the TT/MAC/MSDOS version comes out, you'll already be a pro at this stuff!



Overview

First, let's try to present an overview of just what this program does....

Imagine any object sculpted in soft clay—a car, a computer, a can of Diet Coke even. Also imagine a thin shell applied to the clay, sort of a dipped ice cream cone effect.

Take that creation and run it through a giant egg slicer. You now have a quantity of thin disks that, once stacked in the proper order, form the original object. Carefully remove the clay from each slice, leaving the shell. Go around each slice and break the shell into small triangles—make them small enough so they are essentially flat. Record the location of the corners of each of these triangles in a list. From this list, you can now re-create the original object in three dimensions at any time.

That is basically what you do with ChromaCAD.

Your first thought may be "You are going to need a lot of slices to make anything significant." You are quite correct. The slices are actually a series of connected triangular wedges taken from the outer surface of the object—one of the models supplied with the program has 8000 wedges! Get the idea?

You can specify one of six "Paints" for each triangle in your model, each paint being one of over 4000 colors, giving you an almost unlimited palette. When rendered, these paints will assume their calculated intensity according to the amount of light striking each wedge, producing a very realistic view of the original object.

So? Why go to all this trouble? Just take a picture of the thing and slap that in one of those nice color scanners and display it on the screen!

Exactly. But where do you hold the camera when you take the picture? What size lens? Where do you place the lights? How strong do you make the lights? How do you change colors, shades, and contours? More to the point, where do you get the object to begin with?

The whole focus of this program is to create and render a three-dimensional object in any context you wish. All of the preceding parameters (light placement, colors, etc.) can be specified during ChromCAD screen generation. You can even generate a view of the object as a stereo/3D image to be viewed through a pair of red and blue 3D glasses supplied with the program.

Once you have the thing defined, you can look at it from any point of view—even from inside the object itself! And, if you get tired of looking at it, you can print it on your favorite printer (or, possibly at some point, your camera recorder, plotter or whatever). This is not a program that automates the drawing of an object, it is a program that creates an object in three dimensions. Two programs, actually.

Model Builder and Surface Shader

The Model Builder is used to enter the co-ordinates

of the object using a joystick and the keyboard and will run on any Atari. The Surface Shader is used to produce a view of these models with the proper shading and perspective and requires an extended memory machine (like a 130XE).

Common to both programs are the menu system and command structure. Each program is available separately and comes with its own manual. Both manuals are somewhat intimidating, since they contain extensive examples and require a significant time investment. But, then again, these are not trivial programs (you *will* produce quite a few blank screens until you get the hang of it!). Do yourself a favor and go through the manual carefully; it does have everything you need in it.

Features

Features? Sure. Each model may contain up to 158 slices—or *lines*, as Marver refers to them. The figurine you may have seen in advertisements for ChromaCAD has only 50 lines, so this is not as limiting as you may think. The detail in each line is only limited by the available disk sectors, up to 1040 sectors on an Enhanced density disk. Again, the figurine in the ads is only around 450 sectors. Both quantities (lines and sectors) are displayed in the program, so you always know where you stand.

The construction volume is a cube 18,000 units on a side, which should be sufficient for those larger-than-life projects! One command presents you with an orientation view that will give you some idea of where you are (literally) without having to wait for the actual object to be drawn.

Wait? Uuuuhhhhh...Yes. In the Builder, you can request a wire frame view of your model—which can take a little time in a complex structure. In the Shader, you get a fully shaded view—which can take a whole lot of time (30 minutes for the figurine). Give it a "Q" (quick view) before you commit yourself to a full rendering. Oh, boy. A 160x200, four color screen. Wow.

Naw. The Shader allows four different modes of showing your model. You can use a six color (dithered) artifacting mode, GR.15, GR.8, and a stereo mode for 3D. In each mode, the program can flip between as many as 8 screens (all of the same view) to simulate 8 luminance levels. This effect is not too pleasing to your eye since there is considerable flickering, but a camera will average these screens very nicely, thank you (Marver is a photographer by profession).

In addition, the printer drivers will produce much higher resolution than is available on the 8-bit screen, including a graded intensity using a worn ribbon.

Complex Constructions

Internally, screens are generated using model data files and a Menu. There are ten menus on each data disk, all of which can be combined into one composite screen. By that, I mean ten different models from ten different points of view can be drawn as one construc-

tion—the ChromaCAD title screen is a good example of this. In this way, simple objects can be combined to form other, more complex, structures...although multiple, disconnected models can be built on a single menu if you wish.

Just how is this accomplished? In the Model Builder you begin with a BaseLine—your starting point. What you are doing here is drawing the outline of the first slice of your object. This can be a single point if you like or the complete shape of the object.

The cursor is moved to the first data point with either the joystick or a menu entry (of the X and Y coordinates) and the point is plotted with the period key. The rest of the points are plotted in order around the desired outline where they eventually close.

This BaseLine is then stored and the next elevation is plotted (referred to as the HighLine). During HighLine generation, the outer surface of the model is defined as a sequence of triangles whose vertices lie in both the LowLine and the HighLine.

Each triangle is tagged with one of the six surface "paints" at generation time. These paints are similar to the color registers used in the 8-bits, in that the actual values are generated through indirection—they can be changed at any point (even after rendering. I'd like to see how Marv is going to do *that* on a VGA screen! [grin]).

Of course, the builder program does not generate solid views of your model. Whenever you want some idea of what your object looks like, you can orient yourself in space and request a wire frame view.

The menu entries used for these construction views can then be stored and used (after adding color and lighting information) directly in the Shader program—a much faster path to setting up your output than experimenting in Shader.

In a simple construction (with vertical sides), tools are available to easily complete the HighLine data points. Straight line and circular/elliptical segment macros are also supported in the program. This HighLine/LowLine process continues until the complete object has been defined and you are ready to move into the Surface Shader program.

Fun with Shading

If this sounds like a lot of work, I agree. The Builder is where you do the bulk of your work. The Shader is where you have all your fun.

Once the model is "built," you move to the Shader program. While in the Builder, the ten available menus can be set up to display views of your objects. If these are "ready-to-go," all you must do in the Shader is specify the paint colors, lighting and mode. Or, you can generate all new viewing sequences and positions.

The available colors can be changed after the view is generated, while the lighting and mode are fixed during rendering (although you can request fewer screens in your current mode). The ability to change colors is important since each time you request a new

screen to be built takes many minutes. Not much work to Shader, just a lot of waiting.

The end result is a screen to look at. Really, a screen to photograph. For those major projects, Marver has some photo-specific features, such as tiled output and timed display.

Tiled output just breaks the object view into as many as 81 screens and presents them one at a time. Just so you don't have to stand there for half a day to take 81 shots, you can have the joystick ports snap your picture for you.

Timed display compensates for the lack of precision in some cameras when using long shutter openings (I'll take Marver's word for all this). Instead of opening the shutter for a proper exposure, ChromaCAD will display the screen for a fixed time (leave your shutter open continuously).

My first thought was that the figurine in the ads must be a tiled shot—it isn't. Wow, I'd sure like to see one! I have seen the figurine printed in dot-matrix. It looks great, but you can judge for yourself as I've included a sample printout of the figurine.

Opinions?

This program actually does what you expect—I think I spent some time expecting to find the "hook" in this software and just never did. Not that this is *The Program to End All Programs*. You know what I mean—you hear about a program that says it does this, that, and everything else, but when you go to do something on it, it just doesn't meet your expectations.

This is a 3-D model building and rendering program. That's what you are going to get. Not little dinky, simple models. Big, complicated constructions. Real stuff. It is absolutely amazing. Slow, but amazing!

What would I want to change? It would be nice to know how far along the program is while it is generating (rendering) a screen. (The screen is blanked for speed.) The processor has to calculate the visibility and intensity of each wedge in the model, so total time is dependent on size, complexity and orientation. You will learn from experience what to expect, but some indicator would still be nice.

I never had any kind of lock-up on the system, so just be patient—it's going as fast as it can. I did try an OmniMon chip on the program, which has much faster math routines. No difference at all. Marver wrote this in Forth and uses his own integer math (sigh).

As it now stands, the programs do not contain a printer driver or a way to save a screen as a DOS file. Both of those routines will be available soon (I have seen the printed output already) and will probably be PD. In the meantime, I could pull out a single view using OmniMon to store \$4150-\$5FFF as a GR.15 screen. From there, I can do my visual demo or print with existing utilities. [Ed: These utilities will be on an upcoming AIM 8-bit Disk of the Month, as soon as they are available.]



Marver has been very responsive to requests for these add-ons—he has already modified Shader to run on a Rambo upgrade. Under Rambo, you can only flip two screens instead of the normal 8, but this is a limitation of Rambo, not ChromaCAD.

Builder and Shader are already available at your favorite mail order source for \$30 each or directly from Palette Imaging at (201) 767-3913. If you like to have fun on your computer, take a look at them!

It would also be nice if a number of constructions found their way onto the boards as PD. Oddly enough, this series of programs is the result of a bet between Marver and his son. Four years after the wager, Marver won his \$5. I think I'd like to make a few bets with Marver myself!

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Abbreviator ST

Abbreviato ST

Available directly from Kyle Cordes for \$19.95, including shipping, Abbreviator ST is an easy to use abbreviation expander desk accessory for use with your favorite word processor, database, ect.

Unlike a macro program, Abbreviator uses plain text abbreviations—there are no more cryptic ALT and CONTROL key combinations to remember. The abbreviations of your own choosing are typically short mnemonics representing a frequently used text fragment.

For example, one might use "mon" as an abbreviation for Monday. Abbreviations may be up to eight characters; the corresponding expansions may be up to 480 characters long each and may contain special characters such as tabs, returns, arrows, escape and a special "suppression character." (More on this character later.)

The power of this program stems from this flexibility. The special characters can make negotiating a database easier. Embedded returns make automation of tedious typing sequences. For example, simple "aimadr" could expand to

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By abbreviating frequently typed text fragments, Abbreviator ST can save you some real time.

As you type, Abbreviator ST replaces your abbreviations by their expansions. The expansion is triggered by certain characters which typically end words—space, period, comma, semi-colon, colon, single and double quotes, right parenthesis or return.

The program intercepts keystrokes at a very low level, making its manipulations on the input trans-

Abbreviat ST

Abbrevia ST

Abbrevi ST

Abbrev ST

Abbre ST

Abbr ST

Abb ST

Abb. ST

Bill Magro
CUSTUG

parent to other programs and its compatibility seemingly perfect. It works in virtually every typing situation—even in dialog boxes.

As you type, Abbreviator ST watches your keystrokes, constantly looking for your abbreviations. When one is spotted, it sends enough backspace characters to erase the abbreviation and then sends the expansion. For example, if you type "mon[space]", the program you're using sees "mon[backspace][backspace][backspace]Monday[space]".

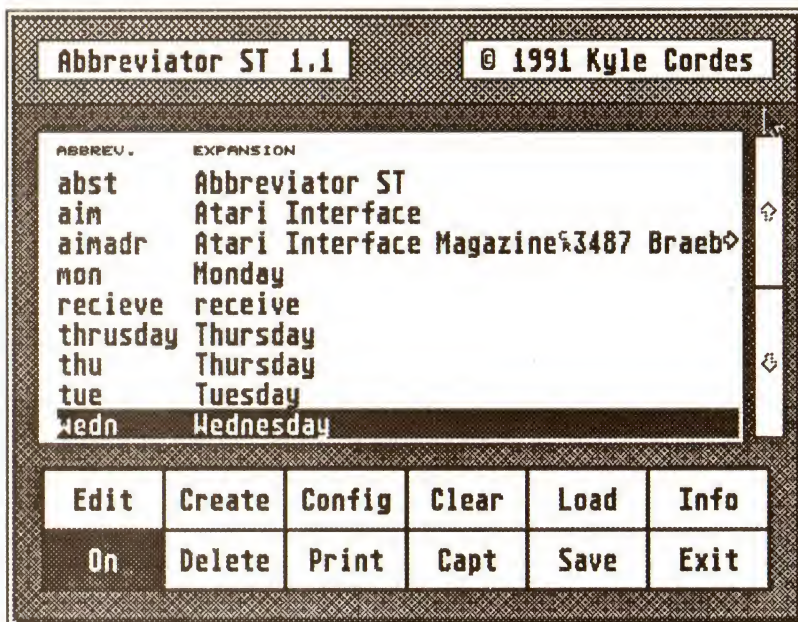
The result? Your typed abbreviation is replaced by its expansion. The character that triggered the expansion is passed through as well, so nothing slows down your typing.

It is useful to understand how Abbreviator ST looks for abbreviations. It scans the input, watching for "words" that match its list of abbreviations. A "word" begins after any non-alphanumeric character, including the arrow keys and backspace. A "word" ends with any of the expansion triggering characters listed above.

There are some unfortunate results associated with including backspace in the class of characters which signal the start of a "word."

Consider this example—you have "st" as an abbreviation for "Atari ST." You are typing along and begin to type the word "latest," but you make a typo, getting "latets" instead. You hit backspace twice so you now have "late" and add the correct ending of "st."

The result is quite unexpected—your document now reads "lateAtari ST." When you typed the backspaces, Abbreviator ST began looking for a new word, found "st" and expanded it into "Atari ST."



This may seem like nitpicking, but this type of expansion breaks your train of thought and could be annoying enough to make you quit using the program. Eliminating this behavior in the program would be rather simple, so it might be removed in a future release of the program. The lesson, of course, is that you have to choose your abbreviations carefully—avoid common suffixes.

There are certain cases where you won't want Abbreviator ST turned on. If you work with a command line interpreter, unexpected expansions like those above can be rather frustrating. If you have 'prg' as an abbreviation for 'program', the command 'zoo x archive.zoo *.prg' will be expanded to 'zoo x archive.zoo *.program' when you hit return, ruining your command.

One of the most convenient abbreviations is "i" for "I"—this automatically capitalizes "I." If you program in a case sensitive language like C, however, you will find your variable "i" capitalized each time you use it—enough to drive you bonkers.

Fortunately, Abbreviator ST has a Hot Key to turn it on or off at any time. The key is user configurable, to avoid conflict with other programs' Hot Keys. Abbreviator ST can also be turned on and off

from its control box. You will want to turn Abbreviator ST off in the cases above and in some others.

Because of Abbreviator ST's friendly interface, creating and editing abbreviations is intuitive and easy. You can print, load, and save different abbreviation sets—you are limited only by disk space. You could, for example, use different abbreviations in your word processor and database programs. A configuration page lets you set the default abbreviation file (which is loaded at boot time), hot key, and abbreviation buffer size.


A warning for hard disk users: when you first install ABBREV.ACC and SAMPLE.ABR on your hard drive, it remains configured for an abbreviation file A:\SAMPLE.ABR. When you reboot your computer, Abbreviator ST looks for this file. If the floppy is no longer in drive A:, Abbreviator ST doesn't recover gracefully—it hangs the machine. Otherwise, the program is simple to install and operate.

The program's performance is impressive—there is no noticeable slowdown in your computer. If you choose your abbreviations carefully (to avoid the above pitfalls), Abbreviator ST is out of sight and mind until you need it, so you'll want to leave it installed at all times.

One clever feature is a capture buffer which always contains your last 200 keystrokes. You often don't realize which phrases could best be abbreviated until after you've typed the phrase.

For instance, let's say the first time you type "twentieth century intellectual history" in your paper, you realize you'll need this phrase a number of times. You can bring up Abbreviator ST and click on "Capt"—you are now editing a new abbreviation with your long phrase already typed in for you. Because no retyping is needed, you are more likely to abbreviate things on the spur of the moment.

Another interesting feature is the suppression char-



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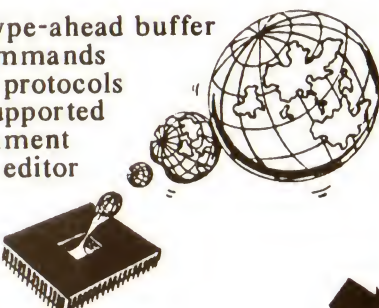
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acter (^S). By putting this character at the end of an expansion, the character which triggered the expansion is not passed through to your application program. This is great for our German friends who tend to build up huge words: "utg" could be an abbreviation for "Untersuchungs." When a journalist writes about some new investigatory committee, she can type "utg ausschuss" and get "Untersuchungsausschuss" instead of "Untersuchungs ausschuss." The trailing space is suppressed by the suppression character. You will appreciate this flexibility when and if you need it.

Abbreviator ST does have a couple of nasty bugs. The test machine had TOS 1.0, and the program was in version 1.1, so these may not affect you. In the program's control panel, clicking the 'Info' button displays the info box which says "Click anywhere to continue." No amount of clicking has any effect—rebooting is the only option. The second bug is more likely to lead to lost work. While naming an abbreviation, typing an underscore () either hangs the machine (with bombs) or resets the computer, depending on the application program you are running. Beware of these.

Abbreviator ST comes on a single-sided disk and runs on ST, STe and TT series computers. The accompanying ten-page, bound manual is well written and concisely takes the user through all of Abbreviator

Editing: ainadr___
Help
Cancel
OK

EXPANSION 1

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ST's features and controls. A registration card is also included in the package.

All in all, Abbreviator ST performs as advertised—efficiently and transparently. For the light user, \$19.95 to expand the occasional abbreviation will be a bit much to spend. For people who do a lot of repetitive typing, however, Abbreviator ST is an invaluable tool.

The possibilities in database use, invoicing, form letters, and many other applications are limitless. Abbreviator ST may be just what you've been looking for.

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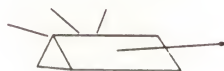
If your disk has both ACC and PRG versions of EdHak, they are exactly the\$ same except for the name. If your disk has only the ACC version, you can\$

File	Edit	README.Z1R	#000057 c:\$80
Ed Open...	Find/replace	& 2.1R 23 Jan 1991\$	----
-- Save...	Wrap/reformat	---\$\$\$If your disk has both ACC	
a Help!	Insert bytes	are exactly the\$ same except fo	
r Print...	Date insert	ly the ACC version, you can\$ cre	
at Upload...	Block...	p or renaming it to EDHAK20R.PR	
.\$ New config?	Text <-> Hack	p EdHak to run at all, please se	
e macros F1-10	View/edit RAM	ask for possible explanations an	
Launch PRG	Encryption	ted in hearing about problems (a	
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EdHak's Text mode window shown underneath "Hack" mode window

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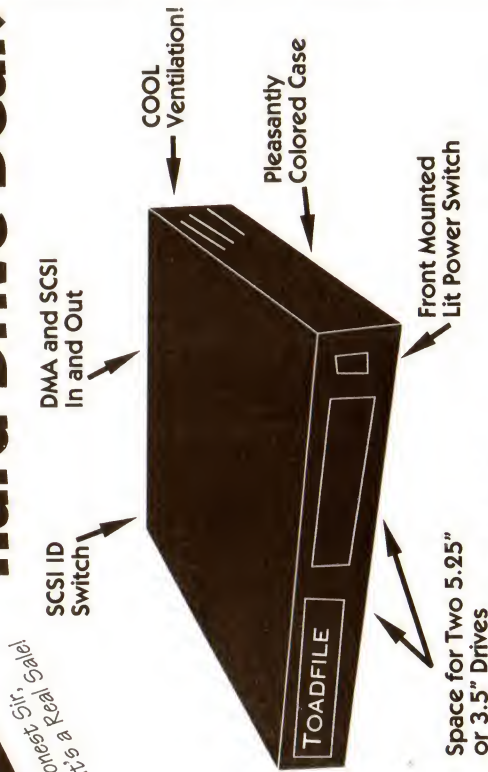


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When we see a good deal, we don't pass it up. So when we were offered the chance to sell some excellent color monitors, which just happened to work on the ST, we jumped right on the opportunity. The truly spectacular thing about the monitors (excepting the price) is that they support *three* kinds of inputs! It's got an ST compatible *analog RGB* port, a PC-CGA compatible *TTL digital RGB* port, and a *composite video* input with separate chroma and luma too! Ponder it: using the same monitor on your ST, a PC compatible and an Atari Eight Bit or VCR! It even has an audio input and speaker! The monitor has a beautiful glossy twelve-inch screen and a picture quality which surpasses even the best SC1224 monitors! The monitors are reconditioned (but are factory fresh), so we know how they work, and that means that we can offer a complete (parts & labor) six month warranty! The quantity is limited though, so order yours *today!* Please specify ST, Eight Bit, PC, or Gray X-MP connection cable.

TOAD-RGB Color Monitor: Only \$239!

WE'VE GOT 'EM ALL!

Atari SM124 ST Monochrome Display	\$149
Atari SC1435 14" Stereo Color Monitor	\$319
Magnavox 1CM135 14" Stereo Color Monitor	\$309
Acer 7015 Multisync Monitor 14" 28mm Pitch	\$409
Mitsubishi Diamondscan 14" 28mm Pitch	\$509
Toadswitch-M Multisync Controller	\$59
Toadswitch Monitor Switchbox	\$39

Dave's Christmas Monitor Poem (By Dave)

The 124 is white as snow, its price is also incredibly low
The 1435 is glossy and bright, its colors deep into the night
The Magnavox can let you see what might be on your TV
Fine Acer's a multisync, oh do embrace her!
The Diamondscan has a screen so sharp and clean
And hail the Toadswitch — ah it's so real!

The Atari ST's have always been finicky about monitors. With a seemingly endless array of color monitors on the market (at reasonable prices, too), why should we be bound to Atari brand color monitors? That's a good question. The answer is that the Atari uses *analog RGB* and until very recently, *TTL (digital) RGB* was the norm. Now that the analog systems of VGA and Super VGA are more popular, analog RGB monitors are more popular too. So you'd think the problem would be solved. Lo, a quandary still exists. Now, the mainstream monitors are too fast for the Atari's to use! Most VGA and Super VGA monitors have a fixed horizontal scan rate of 31.5KHz, and the Atari runs at 15.75KHz. So, while the RGB standard has changed in our favor, the speed issue is still boxing us in. When you boil all this down, you get a relatively small set of monitors which will actually work on an ST. This set includes the Atari SC1224 (12") and SC1435 (14") monitors, a few "multisync" monitors (which have the ability to lower their horizontal sync rate to 15.75KHz), and the handful of monitors that, for whatever reason, were made with compatible specifications. We sell them all. If you like being stuck with the Atari name brand monitors, that's cool — we have them. We also have great deals on multisync and other compatible monitors, like the Magnavox 1CM135 and our own refurbished Toad-RGB color monitors. With your new-found monitor knowledge, examine our offerings and buy what you need — now, while they're on sale!! And if you want to buy them now, while they're on sale!!

HOLIDAY SALE!!

1000 Sheets of Paper	\$10	PC-Speed STE Emulator (STE Version)	\$189
1MB SIMM Board	\$49	PC-Speed XT Emulator	\$189
AT-Speed 16MHz 286 Emulator	\$369	Phasar 4	\$59
Atari 1MB STE 6 Month Warranty	\$349	Quantum 52MB HD Mechanism	\$279
Atari 2MB STE 6 Month Warranty	\$449	Softlogik PageStream 2.1	\$174
Atari 4MB STE 6 Month Warranty	\$549	ST Modem Cable	\$12
Atari 512K STE 6 Month Warranty	\$329	ST Printer Cable	\$12
Atari ABC 386SX & 386 DX Machines	Call	SyQuest 44MB Cartridge	\$75
Atari CX40 Original Joystick	\$7	SyQuest 88MB Cartridge	\$119
Atari CX80 Trackball	\$8	Templicity (LDW Version)	\$28
Atari Mega STE 2 50MB HD	\$1199	Timeworks Datamanager Professional	\$89
Atari Mega STE 4 50MB HD	\$1299	Timeworks Desktop Publisher II	\$149
Atari Mega STE Without HD, Subtract	\$150	Tracker ST	\$52
Atari Mouse STM1	\$41	Versasoft DBMAN v 5.2	\$154
Atari Portfolio Palmtop PC	\$239	Virtual Reality Volume 1	\$139
Atari Portfolio Parallel Interface	\$39	Virtual Reality Volume 2	\$245
Atari Portfolio Serial Interface	\$59	Z-RAM 2.5 2.5MB Board (W/2MB RAM)	\$189
Atari SF314 DSDD 720K Drive	\$149	Z-RAM 2.5, No RAM	\$89
Atari SLM605 Drum	\$129	Z-RAM 3D 4MB Board (W/2MB RAM)	\$199
Atari SLM605 Laser Printer	\$1049	Z-RAM 3D 4MB Board (W/4MB RAM)	\$249
Atari SLM605 Toner	\$29	Z-RAM 3D, No RAM	\$99
Atari SLM804 Drum	\$154		
Atari SLM804 Toner	\$39		
Atari ST Book Notebook Computer	Call		
Atari Stacy 2 20MB HD	\$1499		
Atari Stacy 2 52MB HD	\$1699		
Atari Stacy 4 20MB HD	\$1649		
Atari Stacy 4 52MB HD	\$1849		
Atari TOS 1.4 6 or 2 Chip Set	\$59		
Atari TT030 Computer Systems	Call		
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Calamus Outline Art	\$149		
Calamus v1.09N	\$169		
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Golden Image DSDD 720K Drive	\$149		
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ICD Advantage Host Adapter	\$79		
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Keylinks for 520/1040	\$21		
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Mega STE/Portfolio Modem Cable	\$12		
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PC Ditto Software	\$79		

Toad's Special Holiday Sale Program Pick of the Moment



M.O.S. Disk Utilities

• This new program from newcomer Maximum Output Software will do darn near anything to repair or optimize your hard disk. Is your hard drive slowing down because files are becoming fragmented? Scared and confused because your FAT table is mysteriously corrupted? Boot sector blues? Too many sectors in the last track? Need a break from endless seeking? Having trouble separating the good from the bad? Confused about the origin of frozen dinners? You need **M.O.S. Disk Utilities**. This program is the best hard disk utilities package on the market today. Includes a 100% efficient defragmenter, FAT, file, and directory repair programs, hard disk tester, bad sector enhancer, and more! Will run on any ST or TT computer and hard disk! Introductory offer.

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- 3. LEGENDARY SPECTRE GCR** — The Best Mac Emulator. That's right boys and girls, the world of Macintosh can be yours with any ST or TT computer. This fine emulator from hacker and mystic Dave Small makes the Mac Classic look like a tricycle. **ONLY \$219! MAC 128K ROMS — \$300!**
- 4. LEMMINGS** — Dare I say this is a yuppie simulator? I hate games, but I love this one. Thousands of little mindless creatures must be saved from the sweaty palm of conformity and you're just the management consultant to do it. Who cares if you lose a few in the process? And if you screw up, nuke 'em with a clean conscience! **ONLY \$35!**
- 5. ATARI SX212 Modem** — 1200 Baud Hayes Compatible Modem from Atari. Works on ST or Eight Bit. Eight Bit Cable & Software Package — \$19. **SX212 MODEM ONLY \$29!**

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4% Credit Card Fee **Only** on Items > \$300
 *Use your head instead of a hat rack. *J.D.
 *Toad's computers are not for sale. *B.W.E.
 *The wise man built his words upon the rocks, but I'm not bound to follow suit. — R.E.M.

Informer II

S. Michael Hallack

Informer II tries to be both powerful and friendly. Unfortunately, it does not totally succeed on either attempt.

Informer II is a database program by Soft-Aware that attempts to walk the tenuous line between power and ease, while still weighing in at a bantam price of under \$100.

Setting up the database was fairly intuitive. All that was necessary was to select the add column function and then be prepared for the barrage of different formatting functions that appear. Strict numeric only fields took a little getting used to, but the program gives you error messages explaining what you did wrong until you get Informer II's format correct. This can be frustrating, but it is certainly a welcome relief to programs that do not understand what the user is trying to do, and give no indication anything is wrong.

Once the columns have been created on the "list"—the main spreadsheet type screen—clicking on any of the cells switches the display to the "form" level. This is where all data entry is performed. This screen displays one field

from each column in the main list. The fields on the form can be moved about, expanded or shrunk with simple point and click operations.

The structure of Informer II is based upon this relationship of the compact list (which shows a brief overview of all of the fields and records) to the form (which displays a fully formatted single record and all of its fields).

It is no wonder, then, that the principal Find function it uses is based upon the list. More specifically, it uses a "sublist." The sublist is created by giving the program a list of "fields" and "qualifiers." The screen on which this is done does have a lot of helpful information written in all of its nooks and crannies, but it is still quite daunting.

The sublist is just like the list, except that it only contains the records that you searched for. Once it has been formed, it can be toggled back and forth with the main list by simply clicking on a shaded box in the upper left corner of the

Desk File Do... Display Print Sequences

<< Table 1 >> - Club (Key)

Club (Key)	Full Name		
STARgroup	STARgroup		
Address			
2312 Ironstone Dr. E.			
City	State	ZIP	Country
Jacksonville	FL	32216	
Contact Person		Phone #	
S. Michael Hallack		(904) 646-0567	

1 1 2 2 3 3 4 4 5 Save 6 Undo 7 Drop 8 New 9 Prev 10 Next

<< Table 1 >>						
24 Club (Key)	Full Name	Address	City	State	ZIP	↑
1 SAGE	Spectrum Ata	PO Box 18562	Erie	PA	16514-	
2 SALSA		PO Box 1342	Sault Ste. M	MI		4
3 SALSA	ST Atari Lea	PO Box 18731	San Antonio	TX	78218-	6
4 SCAT	Suburban Chi	PO Box 72266	Roselle	IL		9
5 SDACE	San Diego AC	PO Box 90007	San Diego	CA		8
6 SEVAC	South East V	PO Box 662	Chandler	AZ		1
7 SPACE	Southcentral	PO Box 11446	Harrisburg	PA		9
8 SST	Sacramento S	PO Box 21489	Sacramento	CA		4
9 STAG	Saginaw/Tri-	4765 N. East	Midland	MI		4
10 STANCE	ST Atari Nor	1174 Larkspu	Lyndhurst	OH		6
11 STAR	ST Atari Res	329 Sumter D	Belleville	IL		3
12 STAR	ST Atlanta R	3069 N. Broo	Chamblee	GA		
1 1	2 2	3 3	4 4	5 Save	Undo	Drop

screen. This box also contains the number of records in either the list or sublist. I found it convenient that all the records contained in the sublist are also highlighted on the main list.

The data entry is quick and painless except for one problem with fields containing multiple lines. When moving between fields, the RETURN key or arrow keys are used, but to move between lines in a single field the TAB key must be pressed.

This is not a problem in and of itself, however. The last position you type on on one of these lines will *always* be the position that the cursor returns to when you enter this field a second time. So, if you intend to change data in multiple line fields frequently, you will have to use the mouse rather than the keyboard to quickly get to the right position.

Another annoyance is the necessity of entering the "key number" for each and every record. It simply doesn't make sense that the computer will not automatically number the records.

One of the more unique features of Informer II, the ability to display Degas and Neochrome pictures inside fields of a form, suffers from a technical problem. It just takes too long to load the picture in and size it correctly to the field. Each

time it loads the picture, you are treated to a mind-numbing pause that is really inexcusable.

The problem arises because Informer II does not save the graphics as they appear in your database. It always accesses the picture data in its original raw format and therefore loads *and* figures out how to display the picture in a particular field every time you desire to view it.

The instruction manual, while being thick and fairly complete, was very difficult to read. Not only were the pages poorly photocopied, but the text itself was incredibly small. If you do not wear glasses now, you might need to after reading this manual!

The writing was fairly clear and helpful, but the layout was unnerving. The most obvious blunder was that installation was not covered until chapter eight. The index was of little use also—when I had a problem with printing, I found that 38 pages referenced the word "PRINT" while another 29 pages contained the word "PRINTING." It might take less time to re-read the entire manual than to look all of these up.

Also, the manual is numbered by chapter and not by page alone. The index is numbered by page alone, so that even if you might have enough time to

Print Forms (using format)

1 b>1"("a")"/c/d>5e)5f)5g//\

2

3

a = Col a; c7:2 = Col c 1st 7 Line 2; \soft newline/ /hard newline
 "..." = constant; \6 = 6 spaces; \5 = tab to 5; ^27 = decimal 27 (ESC)
 ^40^80 = next "up" at 40 & 80; (x,y) = after x records, skip y lines.
 EXAMPLE: ^27^14"Label" ^20a10/05b10/2/203c/05d20" ^74e>f/4f8,43^40^80

Screen File Printer

Ignore "SET Print Options" Print Test PRINT Current record PRINT ALL

look all of these pages up, you would still be unable to find them.

Informer II also offers help in the way of help screens and tutorials. To be honest, I didn't do any of the tutorials—they all looked long, boring and not very indicative of a program that is supposed to be intuitive. I did use the help screens and found they were quite helpful, although they are stored as full 32K DEGAS pictures and thus take up a lot more disk space than was necessary.

I have a few misgivings about the printing functions. The five main printer functions are divided into three different forms. Three of these functions are 9-pin Epson compatible screen dumps. These are referred to by the manual as the "Graphic" printouts.

My Panasonic 24-pin printer prints out something "Graphic," and I might say something "Graphic" about the poor job it does, but it certainly does not represent the "Graphic" display that is on the screen. The authors regrettably did not include any sort of printer drivers, so if your printer is not a 9-pin Epson compatible, you will be unable to use over *half* of the printing options that are available.

In fact, each of these three printing functions simply rearrange the screen and then perform the ALT-HELP screen dump built into every ST. Because these use the standard screen dump, they are not affected by any of the printer option screens found in Informer II.

The Forms printing option uses a standard ASCII dump and therefore can be used with a much wider range of printers and with all of the printing options. Using different formulae in each of the available print form slots, you can design your own printout. It works well, even though it is not very intuitive

and complains a lot when you do not follow Informer's conventions closely. Unfortunately, I was hoping for some way to print in the same form as the data appears on screen without the hassle associated with the graphic printouts or designing printing formulae.

The last printing method, report printing, uses the table list rather than the individual forms. It prints a fairly accurate representation of the on-screen tables.

Informer II does provide a convenient way to upgrade from other databases. A conversion program

is included for Datamanager ST, DB Master One and Habaview files. One of our STargroup members loaned a video tape Datamanager ST database to me, so I was able to test this feature out. Informer II translated this database very quickly and easily. Nothing seemed out of place, except for two of the records that had their titles switched!

Overall, Informer II tries to be both powerful and friendly. Unfortunately, it does not totally succeed on either attempt. Its use for serious business purposes is called into question by its horrid printing functions and the limitations of a database that cannot expand beyond the amount of RAM memory.

The use of the lists, sublists and forms makes it more intuitive, but some of the screens used inbetween these functions are overwhelming. If the manual gave any help, this would be forgivable, but the instruction book happens to be the worst aspect of Informer.

However, for its price range, Informer II may still be very appealing to ST users who own one of the earlier database programs and needs the conversion utilities. Instead, I am looking forward to Informer III!

Desk File Do... Display Print Sequences

Form Page 4; char ESC=quit HOME=home ANY=next

Chamblee	GA	30341
STARgroup (STARgroup)		
2312 Ironstone Dr. E.		
Jacksonville	FL	32216
ST Atari Road Runners (STARR)		
15 John St.		
Ansonia	CT	06401
ST Users Network (STUN)		
PO Box 27285		
Salt Lake City	UT	84127
Salinas Valley ACE (SVACE)		
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For ST, MEGA, STE and MEGA STE/TT

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Clock Option on Memmor Board \$30
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Send in your 520STfm for an upgrade to ONE Megabyte complete with installation and test for only \$99

EXPANDABLE Hard Drive Kits

come complete with software and all parts needed to get the system operational, 1 year ltd. warranty. Four different case styles with various drive mechanisms are available. see catalog for detailed listing:

1. Tower Type, 10" w x 6.8" h x 15" d, with 150 W PC power supply w/fan, room for up to 5 half height hard drives or combination full/half height, our most expandable case

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M44SQ SYQUEST 44 MB + 1 cartridge \$549

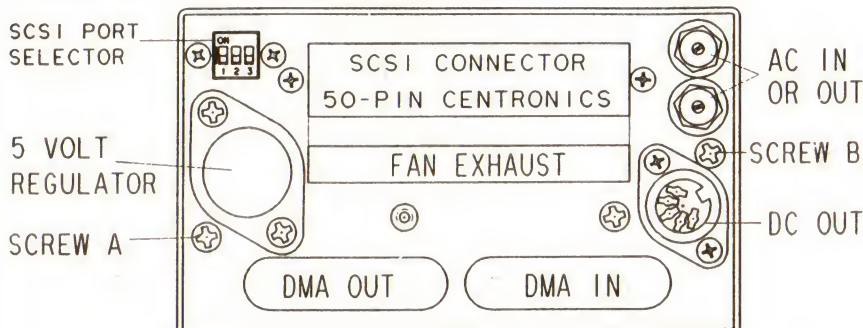
3. Desktop Style, 4.5" w x 6" h x 13" d, ready for 2 half height or 1 full height drive. 55 W power supply, fan optional

D84SC 84 MB 24 ms \$499

4. Modular Case, only 4.8" w x 2.8" h x 7" deep, fan, air filter and shock mounts standard. Small size/low weight, DMA thru, SCSI connector and selector switch make data on this drive very transportable and you don't need a second drive of the same kind at the other end!

M49SC 49 MB 28 ms \$399

Drawing shows connection options on back of Modular Case:



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Our new case line allows you to install both, ATARI and PC - complete with expansion bus, back to back into a tower case measuring 9.5" w x 19" h x 16" deep. Both mother boards are completely accessible for service and install independently, allowing you to upgrade in small steps at your convenience.

There is currently room for up to three 5.25" and at least four 3.5" drives. Additional drive slots can be built in as an option if ever necessary. Other Peripherals like modems can be integrated as well.

A 230 W power supply will support all these options.

Power users will want to use one monitor for each CPU, something you can't do without additional hardware on an emulator. Alternatively you might use an optional front operated monitor switch with one multisync monitor.

The icing on the cake is an optional high speed bus interface that makes peripherals (hard and floppy drives for example) and other resources like memory available to both machines in a transparent way. You might use only 1 set of drives, resulting in significant cost savings. There is not enough room here but our catalog will give you examples on how to beat emulator cost and performance hands down.

Modular design allows us to offer this case for all current ATARI models, from the oldest 520ST to the MEGA STE/TT.

On the PC side everything will fit, starting at the bottom with a 12 MHz AT right up to a 50 MHz 486 mother board as the current top end.

All case kits come with parts to install a standard machine as originally supplied by ATARI. Optionally brackets and cable sets take care of most popular add-ons.

Complete kit for std. machine \$295
Please supply machine type with order.

Already announced products making it finally into manufacturing:

CPU expansion board, gives ST models MEGA expansion port + clock and blitter socket where missing. Spring loaded contacts and two metal latches allow quick installation/removal. Priced between \$79 - 99 depending on machine type. Also needed to install upcoming 68020 board (target price under \$400).

Our High Density floppy controller consists of a small (2.2"l x 0.8" w x 0.3" h, no bulky cabling - and should fit into all machines. \$69

Low priced Host Adapter, part #HIA1, priced at \$69

CPU CASES:

Upgrade 520/1040 to the MEGA standard.

* Separate CPU and keyboard, gain space for three each 3.5"/5.25" floppy, hard or tape drives in two separate drive bays. Full height drives will also fit.

* A 150 W power supply with fan provides power for all possible combinations and keeps everything cool

* Reset button on keyboard

* A delay circuit allows fully automatic HD power-up.

* Monitor can be switched on/off with CPU, using an optional cable.

* Our kit uses a steel case 18" wide x 12" deep x 8" high, easily strong enough to support a high resolution monitor.

* The original keyboard gets a low profile enclosure, 18.7" wide x 7" deep x 2" high, consisting of a metal bottom part and the modified plastic top of the original case, supplied as exchange or you do the modification your self. The kit comes preassembled and installs without soldering. All mounting kits, wire harnesses and connectors to modify a standard machine are included.

Complete kit, please specify your machine type \$249

OPTIONS:

Hard Drive kits for the CPU case consist of host adapter, support bracket, DC harness and SCSI cable with standard CENTRONICS 50 SCSI out. These kits might also be used with customer supplied case/power supplies. Drives. Additional connectors \$8 installed.

C0S No Drive, install your own emb. SCSI drive \$99
49 MB - \$349, 84MB - \$429, 105 MB - \$499 Kits fit also TOWER COMBO. See catalog for more options.

KEYBOARD KITS only as used on our CPU cases consisting of metal bottom, connecting cable with reset and modified plastic tops on an exchange basis are available separately for \$69, please specify your machine type.

New product currently in design:

New network board that will give users of older machines all MEGA STE/TT communication ports. Compatible with software already on the market, pricing should be under \$200.

Space limitations don't allow a more detailed descriptions. For complete 40 page catalog + addendum contact:

tech-specialities Co.

909 W. Crosstimbers Street

Houston, TX 77022

(713)691-4527/8

FAX: (713)691-7009

We ship COD (\$4) or prepaid (5% discount), sorry no credit cards! Add the following amounts for shipping and handling:

memory upgrades and host adapters, 1st unit \$5, add. units	\$2
Hard Drive kits/CPU cases without drive	\$10/\$20
with drive - special shock resistant packaging needed	\$20/\$30
MOD. and CPU TOWER CASES	\$8/\$25

Houston residents and WILL CALL customers add 8.25%, Texas residents add 7.25% state sales tax.

Above prices are correct on 11-26-91. Prices with a "*" are PREPAY SPECIALS, no further discount available.

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Atari—Suits and Ties at COMDEX

Irwin Brooks
LACE

In comparing last year's Atari COMDEX presence with this year's, I would have to give the Atari group a much improved score.

(all rights reserved)

Las Vegas, NV

The biggest computer show in the United States is the Fall COMDEX Convention/Exhibition held in Las Vegas, Nevada. This year, the October 21-25 show drew an estimated 135,000 people. A "disappointingly" small increase of only 10,000 more than last year blamed on our "economic slump."

The COMDEX Convention is the largest convention that Las Vegas hosts. This year, hotels were sold out months before the show, requiring last minute travelers to commute from up to 90 miles away! The traffic and crowds were incredible.

The convention is so large that it overflows both of the largest convention centers, the Sands Expo and the Las Vegas Convention Centers. The overflow went into three large hotel/casinos—Ballys, Riveria and Mirage.

Understanding that most of the show centered around the IBM PC and compatibles, exhibits were still quite varied. There were hardware demonstration that boggle the mind. Voice recognition command systems; every size, shape and capacity of Winchester hard drives; CDROM drives; and read/rewritable removable optical drives were offered by several manufacturers.

Printers and plotters in multi-color, laser and thermal transfer types were everywhere. All types of scanners, monitors (including the new flat color LCD screen type), modems, specialized interfaces and accessories, and anything you can think of for computers was somewhere at COMDEX in the 50-plus miles of display booths.

Don't be confused, this article is really about Atari. However, understanding and appreciating the magnitude and variety of COMDEX adds to comprehension of the remainder of this article.

Atari's Booth

Atari was at COMDEX in force again this year, just like last year. In fact, they had the same location with a very similar booth layout and setup display area. But, let me tell you, the atmosphere and displays were far different. Yes, there were a few of the same companies displaying our same beloved products, but only if the products were high-end.

Atari employees and all Atari exhibitors wore suits and ties. Even the musicians demonstrating their MIDI products—who normally sport uncontrolled long hair styles—had on suits, with their hair pulled neatly back (remarkable). Maybe that was not so unusual after all, since the focus of the Atari exhibit was professional applications.

A real nice touch at this year's Atari booth was a presentation stage used to demonstrate Atari and other developer products. Very professional and informative presentations were conducted on the easy-to-see, large (~30 inch) color monitor connected to a TT030 computer. Comfortable seating was provided for an audience of about twenty, with demonstrations of one kind or another conducted on the hour all day, every day of COMDEX.

ABC PC Compatibles

In the hardware arena, Atari displayed the long rumored IBM PC compatible computers, their ABC line that has actually been available in Canada and overseas for some time.

The Atari ABC PCs are available in three different configurations. The most powerful is the ABC DXII, which is a true 80386DX PC with math coprocessor running at a fast 40 MHz. Next in the line is the ABC SXII, based on an 80386 SX CPU running at a respectable 20 MHz.

And lastly, the Atari ABC NSX is a notebook-style mono LCD 386SX PC

Want to get the most from your Atari investment?

Subscribe to *Atari Explorer*, the Official Atari Journal! Each issue of *Atari Explorer* is filled with reviews, tutorials, hints, and late-breaking news to help you keep pace with the fast-changing world of Atari products! And *Explorer* is the only Atari magazine that covers the full range of Atari equipment — from the exciting ST and TT computers, to the 8-bit home computers, to the amazing Portfolio palmtop MS/DOS computer and the Lynx Portable Entertainment

System — so whatever Atari you own, you'll always find something new, relevant, and exciting in our pages!

Six issues of *Atari Explorer* are only \$14.95 — a savings of 15% off newsstand price! That's a small investment that pays BIG dividends, when it comes to getting the most from your Atari! So what are you waiting for? Subscribe today, and plug into the most useful Atari peripheral money can buy: *Atari Explorer Magazine*!

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Presidential Ponderings

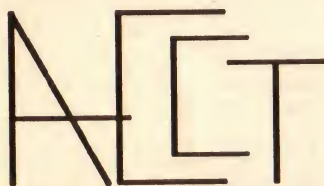
Well, our annual elections have come and gone. There really were no big surprises as each office had only one nominee and there were no nominations from the floor. Of the seven elected officers, three are new. This is good as it provides an orderly transition for the Board of Officers as a group. It turns out that I am among those who will be remaining for another term. I want to thank the AAAUA membership for their support over the past year and I am confident that I will get no less for the coming year. I am looking forward to the new year and to working with the new board. There is much to be done and with the fresh blood and energy, AAAUA should have a great year. Following are the results of our November elections:

President Alvan Sherrill
Vice President Billy Washburn
Secretary Paul Hitzfelder (New)
Treasurer Mike Lively (New)
P.D. Disk Librarian Russell Gibson
Public Relations Larry Allen (New)
Newsletter Editor Manuel Garcia

First, I want to congratulate and welcome our new officers, and thank them for volunteering to accept the responsibilities of their respective offices. I am confident they all will competently carry out their duties in full measure.

I also want to warmly thank the outgoing officers. Sheila Kepner served in an outstanding manner as Secretary, keeping detailed records of both General and Board meetings. Joe Barth did a commendable job as Treasurer maintaining accurate records of our financial status and keeping a keen eye on expenditures and receipts. Bruce Davisson served well as Public Relations Officer, seeing that meeting notices were placed in local publications. Unfortunately, Bruce was unable to complete his term of office due to personal commitments.

Although these members are leaving their officer positions, I am pleased that they all are continuing their membership in AAAUA. My thanks to these officers, as well as to the re-elected officers for their dedication and commitment throughout the past year. The new Board now will be energetically planning user group activities for the coming year. I ask for the support of all members.



The November meeting of ACCT came to order at the home of the Micka's. Our Prez, Dave, physically took a corrected mailing list to the door of AIM publishers. Hopefully everyone will get their AIM now. The people who have not been receiving AIM will be compensated in March when they renew their dues.

Unfortunately those who missed the last few issues also missed articles by an ACCT member Ellen Lentz. Ellen Lentz is a former ACCT president. Her expertise is the 8-bit computers. Ellen's articles impressed David Richardson, author of a manual and developer of over a hundred fonts for Daisy Dot III. Mr. Richardson requested Ellen to write a review of his manual that he sent her.

Ellen also brought in a video tape that someone had sent her. It consists of samples of video titling, based on an article she had written on Video Titler.

We will expect a review of the Chicago Atari show from Roy Sidner, who plans to attend. Roy also has a manual maker program for the ST.

Brian, our PD Connection, came to the meeting with six disk filled. Our disk librarian, Brenda, cautiously checked them for viruses. Several were found to be infected. Remember, you can never be too careful. Brenda intends to sort through the files and make them available next meeting.

Next meeting is Wednesday, December 4, 7:00 at the home of the Mickas'. Call if you need directions. Expect a call on the Christmas party!



ATARI COMPUTER OWNERS RESOURCE NETWORK FORT WAYNE, INDIANA

Notes from the November meeting: Digitizers were the topic for the November meeting. Karl Fadus demonstrated an audio digitizer and kept the group amused with choice sound bytes from "Young Frankenstein." Rob Magdich demonstrated VIDI ST by taking digitized pictures of members with the help of a camcorder. Mike Surface demonstrated the two games: "Tycoon" and "Life and Death."

Eric thanked those that helped at the Indiana Computer Educator's (ICE) Kids Conference and reminded everyone of Pentacon and the plans to attend the Chicago ComputerFest. Kim Stahn had tickets for the Computerfest for sale.

Just a reminder that the January meeting will be the election of officers for 1992 and our annual Gamefest. Come join in the fun at the Shawnee branch library.

Notes from ICE: The third annual ICE Kids Conference went well and ACORN participated by setting up two rooms for the kids to enjoy. Each year, local educators set aside a Saturday to invite hundreds of middle school kids to get some hands-on experience with computers.

Most of the rooms there were set up by the teachers using computers borrowed from around the school district (mostly Apple IIGSs and Macintoshes). We brought nine STs and used four for MIDI Maze (always a favorite with the kids). Rob Magdich digitized pictures of the kids with VIDI ST and Mike Surface used some of the digitized pictures to make wanted posters of the kids using a desktop publishing program and an Atari laser printer. Karl Fadus had his Spectre GCR showing how an ST can run Mac software.

Sweetwater Music had a room demonstrating a studio quality MIDI music setup (with a Mac) but we had our own MIDI music set up with equipment that about any musician could afford. It was also used to demo educational software and a couple of games. The last ST was used to demonstrate the BBS.

The only other user group participating this year was the local Mac user group. Probably 95 percent of the computers there this year were Apple computers. I didn't get a chance to visit all the rooms that were set up but, based on the handout provided to the kids, few people from outside the school system were demonstrating. Only a couple of the local businesses were there. Only a handful of MS-DOS machines were there.

Thanks again to all that participated.

BRAG ST



Buffalo Region Atari Group for ST's

Minutes of General Meeting—October 17, 1991

The October meeting was called to order at 7:30 PM by Gerry Genson and Joe Rogozinski, Chairman Mark Pierro could not be present for this evening's meeting. There were 15 members present.

The first order of business was club announcements and a review of the AIM Disk of the Month. Then we proceeded to call for nominations for four Board of Directors as called for by the club's Constitution and Bylaws. The four nominees were: Carl Barron, Harv Hontz, Mike Leskow, and Lou Krueger. Elections will be at next month's meeting.

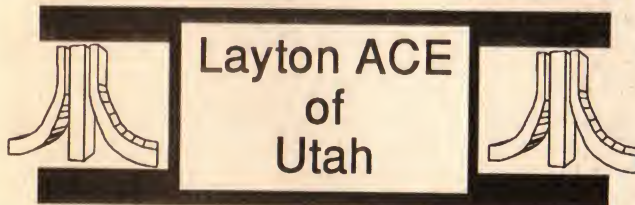
The meeting continued with demos of TV Sports Football and Touchdown Football by Gerry Genson and Hunt for Red October by Dane Stegman, followed by the raffle and door prize drawings, which were won by Gerry Genson and Dave Ryznar respectively. The rest of the meeting was an open forum and concluded at 9:30 pm.

Cyberage Policy Short Computer Club



The officers for the C.V.A.C.C. for 1992 are

President	Jon Goshorn	(216) 494-0738
16-bit VP	Bud White	(216) 848-3856
8-bit VP	Sonny Burgess	(216) 454-6036
Treasurer	Ron Mullens	(216) 794-1990
General Sec'tary	Jim Woodford	(216) 753-5689
P.R. Secretary	Terry Russell	(216) 762-5518



The Layton Atari Computer Enthusiasts (L.A.C.E.) membership cost \$20 per year. Privileges include the AIM monthly magazine, access to the 8-Bit and ST club libraries, monthly meetings, monthly AIM public domain disks, help and friendship. If you are presently not a LACE Club member and wish to join contact the one of following persons or write to LACE, c/o Irwin Brooks, 3897 South 2275 West, Roy, UT 84067.

Your elected 1991 L.A.C.E. Club Officers are:

Mike Russel	President	(801) 546-0707
Doug Hansen	Vice President	(801) 393-6849
Ken Karchner	Secretary/Treasurer	(801) 776-8015
Richard Clark	8-Bit Librarian	(801) 825-5823
Kelly Knecht	ST Librarian	(801) 773-5652
Irwin Brooks	Pub. Coordinator	(801) 731-1516

The L.A.C.E. Club Meets in the basement of the Clearfield Library every second Wednesday of the month at 7 PM. Mark your calendars for the next three meetings: January 8, 1992 February 12, 1992 March 11, 1992.



MACE

Time now to tune in to the MACE channel. Last month's theme was Education. Our leader (Ted) started off the meeting by putting a last call on positions in MACE not already filled. The last positions to be filled were vice-president and treasurer.

After the officer positions were finalized, our president made this wild offer—"If people read about PD or Shareware software and want to order, we will be happy to order for them, and we will pay the shipping charges!"

My thought on this at the moment were, "If everybody ordered one disk of PD software, we could be into this for a mint!" One of the club members wondered if an ad he had seen would qualify. Ted answered, "If you bring in the advertisement and tell us what you want to order, we will be happy to do it."

Then he explained how MACE would benefit from all the new software that would be available from the people who order. MACE would have a copy of it, and we could provide all members with the ability to purchase it themselves. He also mentioned purchase price (of PD software disks) comparable to our prices on AIM and MACE disks. Thinking about everyone getting one disk apiece was still spiraling around in my head.

Participation

The president also announced the participation raffle running from October 1991 until the MACE birthday meeting in May 1992. Details and rules were reported in last month's Journal (there are still a few copies of it left).

One rule has changed—members introducing a new member get five (5) tickets! (Bring your friends, they don't have to own an Atari to join and if they win the raffle they'll have enough to buy one.)

Remember, renewing your membership gets you a ticket and you can renew early. So if your membership expires anywhere in June through September '92, renew now, get your ticket and you'll be set until June-September '93.

You can also get tickets for buying three disks from our 8-bit and 16-bit software libraries, plus you still get the fourth disk free! I know we have enough 8-bit disks to allow you to corner the market on raffle tickets and we are always increasing our 16-bit library (I saw some great pictures on one of our latest 16-bit MACE disks). Submissions to either library could also earn you one or more tickets depending on quality of material.

The grand prize is a certificate for \$500.00 and there will be lesser prizes awarded. You say to yourself "I have to work that day and I can't be there." No problem, you need not be present to win. If your number is called, you'll have the ticket stub to be able to pick up the prize—at the next club meeting if you wish. Winners will be posted in the MACE Journal and on the MACE Forest (BBS). One last thing, submissions to the MACE Journal are worth tickets (the better the article the more you score!).

The Demo

After the announcements, the meeting broke up into 'demo areas'. Software was being shown off the AIM disks (8-bit and 16-bit). Kid Publisher (16-bit) was also being shown at the meeting. Kid Publisher is a desktop publishing program without all the complexities that make up professional packages like Pagestream or Calamus. Mostly for youngsters, Kid Publisher is easy to use, and kids learn how desktop publishing works from concept to printout.

Remote Atari

I saw postings for BBSes on the wall at the meeting which I will print here—MACE Forest (313) 278-6966 300-2400 baud, Adventure Line (313) 445-1313 300/1200 baud, Rambo HQ (313) 422-0978 2400 baud.

In early November, I visited the home of the operator of the MACE Forest and will be writing about his bulletin board and his computer hardware. I was impressed by his setup with three 8-bit computers, floppy and hard drives, monitor and printers all tied together to work in unison. Call in sometime; these bulletin boards have information about Atari (and other computers) and about MACE. Call them day or night, they run 24 hours a day.

The Near Future

Late breaking news—MACE is organizing a presentation of Atari Computers at the Southland Mall. Things to show off at the mall include:

A MidiMaze tournament (16 players per game) with hopefully a prize for the winner.

Demonstration areas for Entertainment, MIDI/music, Business applications and Education.

Information area to pass out Atari and MACE related info.

A Live MIDI demonstration.

The presentation could probably happen in February. I will keep you posted as to the dates and times.

Middle
Georgia



Atari
Users
Group

The Middle Georgia Atari Users Group is the sole Atari club in the Middle GA Area. We are composed of 40 ST members. MGAUG meets the second Sunday of each month at 1 PM at the Warner Robins Library. Annual dues are \$6 with an optional newsletter. The AIM disk of the month, AtariUser Magazine, and Public Domain Library are FREE to paid members.

The monthly meeting took place on November 10 with a fairly good turnout. Mainly we had some great discussions on the Atari and the computer world in general. We also had a large number of used ST programs for sale at the meeting.

It appears that we will have a new President of the club soon. Jeff Vincent has said that he would like to give it a try. Jeff and I will be starting the transition next month. After five years, I am quite ready to hand over the torch. Hopefully with a new president leading us we can come up with some new ideas to get the club going and get more people to participate. GOOD LUCK JEFF!

O-ACES



At our regular November meeting, we elected a new slate of officers for O-ACES. Here they are:

President	Peter Killian
Vice President	Todd Magee
ST Librarian	Mike ("Shane") Yarborough
8-bit Librarian	Bill Zimmerman

Our next meeting (December 11) will be the first of what we hope will be many more holiday parties. The new club officers will make plans and set it all up. After the popularity of our last swap meet, we decided to have them more often -

- the next one will be held in February 1992. We also discussed a different name for the club: "GO-ACES" (for the Greater Omaha - Atari Computer Enthusiasts) was suggested. Those present decided they like our current name just fine. Finally, we discussed having refreshments during our regular meetings and decided that members could bring their own, but the club would not provide any for the time being.

Our new president will be attending the Chicago Atari show later this month and will file a report afterwards. Things are starting to look up a bit in the Atari market and we hope to do our part and build our own form of excitement in Omaha. Till next time, Peter Killian



The Prez Sez by Rick Reaser

Another club year will be at a close by the time you receive this and hopefully, we will have elected a new slate of officers. For those of you who haven't heard, I will be leaving the area this summer for Air Command and Staff College. From there, who knows where I'll be heading. Los Angeles, I hope. We members of the military have to keep on moving. First Dave Koster, now me.

I enjoyed being a part of the club these past few years and will continue to stay involved until the moving van comes this June. We have great members that are always willing to go that extra mile to help a friend or stranger to the world of Atari. That's special and I hope it stays that way.

In other news, the club purchased a color monitor for our ST, so now we have a complete ST set-up and won't have to rely on members to bring their monitors. The club's equipment is also available for short term loan to members in case of emergency breakdowns at home. We have a host of 8-bit equipment as well.

We plan to have a club BBS up this coming year, courtesy of Sam Cherry's efforts and determination. We're working out the details which should be available soon. Our current BBS home, Wildcat Orphanage has some new features for ST users that are interesting. Be sure to check it out at 392-6632.

The November 8-bit SIG was a lengthy demonstration of the new 3-Dimensional Surface Modeling System, ChromaCAD. The demonstration was loosely based on my recent review of the program which will appear in the December edition of Current Notes. Ben Poehland, the Current Notes 8-bit Editor and Alchemist, provided me with a copy of the program and the opportunity. ChromaCAD is extremely powerful and clever, but requires a lot of time investment to master. It is written in Forth, like Rambrandt so it isn't compatible with Atari DOS. There have been advertisements for ChromaCAD here in AIM which are quite informative. I also demoed the Alchemist's Super Video II upgrade to my 800XL. On a sad note, Ben Poehland's house caught on fire and he is resigning his post at Current Notes.

At the October ST SIG, Terry Quinn and John Peters demonstrated several "Load Factors" including the latest offerings from Double Click. I spent most of the meeting rebuilding the RS-232 cable for one of our loaner modems, so that one of our STers could check it out. From what I caught of the meeting, as usual, it was a pretty good turn out and fun was had by all. See you at the next SIG meeting.

PHAST

The November general meeting was held on Saturday, Nov. 9th. Attendance was about average (around 15 people). Our current membership is twenty-seven. We dropped four members from the rolls due to non-renewal, but we had five new members as well as a renewal.

Major business conducted was nomination of officers, which were all filled. And the nominees are:

President	Michael Aubrey
Vice President	Brien King
Rec. Secretary	Wayne Myers (reluctantly)
Treasurer	Wayne Myers (enthusiastically)
Mem. Secretary	Mike Zachary
Sgt. at Arms	Adam Ceton

Elections will be held on Saturday, December 14. Most of the meeting was taken up with demos and other presentations on Adam Ceton's STe, as our club computer failed to perform.



WE'RE NOT JUST PLAYING GAMES ANYMORE!

Business meetings are held at the Springbrook Congregational Church at the corner of Springbrook and Spring Creek Road, just east of Alpine Road, Rockford, IL. We meet from 9:00 to noon every third Saturday of the month.

Our new mailing address is RACC, 5430 N. 2nd Street, Loves Park, IL 61111.

President	Cal Schafer (815) 633-1259
ST VP	Dennis Renner
8-bit VP	George Luhman
Secretary	Mike Ritter
Treasurer	Thom Lofthouse
News. Editor	Ray Smith

Due to economic conditions our newsletter has been unpublished for some time. To find a job, our newsletter editor has been forced to move a couple of times. Last meeting, we determined that only three people were reasonably certain of their job, and 80% were or were about to be unemployed. And now, even IBM is laying off another 20,000, so we Atari people should not be disheartened.

RACC participated in the Chicago Computerfest with LCACE by promoting the NEWELL enhancements for the 8-bit and 16-bit computers. With help from TEAC, The Educator's Atari Club from California, we also promoted their new catalog and programs. We showed these working on both the 8-bit and ST computer using the Xformer.

Dennis Renner also showed Data Perfect using the ST. Now, you can talk about your powerful databases and then you can do it this way and really have a lightning fast operation. We had Leo of LJK right next to us. We had a lot of fun, and I am so happy to have met this fine gentleman. I gave a seminar on Printer Control. And we had Atari Writer Plus up and running in 80 columns for all to see and compare with other 80-column word processors. I had the screws removed from my 800 XL with 1 meg of memory, RAMROD, OMNIMON and OMNIVIEW for all to see how these all look and work together, by simply lifting the keyboard.

Sincerely,
H. Jake Olbrich

R.A.C.E.

Pres.	Lewis Midyette	(919) 828-4319
Vice Pres.	Eric Schofield	851-5134
Secretary	Don Nelson	942-2764
St Librarian	Tony Manino	851-8092
8-bit Librarian	Arthur Katz	881-0247
Treasurer	Robert Yates	552-7053
BBS SYSOP	Robert Yates	552-7053
Galaxy BBS		552-0974

Well gang Christmas has passed us by, and it is a new year. I hope all of you got just what you wanted. I also hope you haven't promised your life away with New Year's resolutions. Some of you might make crazy resolutions like spending less time on GEnie, CompuServe or Delphi. While others will be getting up at the crack of dawn to put on that new, sweet suit you got for Christmas, just to fall back asleep because you were up till 3AM breaking your other half dozen promises.

I feel this year will be a good one for the group. Our attendance has remained constant and we have even found a few new members. Our Christmas party was a lot of fun. I hope everyone that could make it did.

Our meeting for this month will be held Wednesday, February 19th, 1992, at Richard B. Harrison Library from 7 to 9 PM. Club dues are \$20 year and provide access to the Club BBS, subscription to AIM, and access to the club Library.

SCAT SUBURBAN CHICAGO ATARIANS

AN INDEPENDENT COMPUTER USERS GROUP

On December 7, 1991 SCAT will hold its members-only Christmas party. The Christmas party is the time of year when we have the club's auction. Robert Schuricht, our first club President, is the auctioneer. Members bring in any old software or hardware they want to sell, and the club takes a 10% selling fee. Brown chicken will be provided, and members are encouraged to bring something to drink and chips or cookies, etc. We will have some Christmas programs running on the ST and 8bit computers.

We also hope our MIDI SIG can set up some Christmas music via MIDI to get our members in the Christmas spirit. There will be a basket for contributions to the Forgotten Children Fund. The meeting will start at 9:30AM until 1:30PM at the College of DuPage, Room IC1000.

The January meeting will start at 10AM on January 4th, College of DuPage, Room K157. John Buell and his brother, Justin, will demo the LYNX game machine. I am told they intend to connect two or more LYNX machines together. Several other member will bring in there game machines. It looks to be a fun demo. No ST demo, but there will be an 8-bit game demo.

**If anyone asks, tell
'em you saw their
ad in AIM!**



General Meetings are the 3rd Monday of each month at the North Park Recreation Center Social Room, 4044 Idaho Street at 7 PM. ST/8-bit workshop meetings are on the 1st Thursday of each month at the North Park Adult Center, 2719 Howard Street at 7 pm. All meetings are open to the public. Annual SDAE subscription dues are \$18 which includes increased BBS access, AIM subscription, SDAE newsletter subscription, and reduced rates on the Disk of the Month. SDAE's address is PO Box 900076, San Diego, CA 92190.

President Dan Phillips
Vice President Dean Smith
BBS 3-2400 baud (619) 689-8157

The regular monthly meeting was held on Monday, 18 November with agenda of electing new club officers to guide our course through the coming year. At the end of the not-so-secret ballot, Dan Phillips was chosen to lead our group as the new president, Dean Smith as vice president, Jim Tra-seger as secretary and Steve Dato returned for another term as treasurer. Congratulations to all of our new and returning officers.

At the same time as we welcome the new folks, we watched the backbone of our group shift positions. Mike Bergman joined the ranks of past presidents, without the pension of the folks in Washington but nonetheless with our gratitude. He will keep his hand in by taking over the newsletter responsibilities.

Former VP Danny Rickey is a full-time student and we'll look for more out of him after the education system gets done with him. Vladimr Vooss, our past newsletter editor and treasurer, is taking a hiatus from the club as he gets ever deeper into work and play in his chosen fields—music and MIDI.

Thanks to our outgoing officers for their enthusiasm and leadership while helping us remain one of the largest Atari user groups in the United States.

Our December meeting will be the annual holiday season party with yet another attempt to break the MIDI Maze record for most active connected STs participating. We plan on getting back on the demonstration track in January, and have another swap meet tentatively planned for February. If you're in the area, please stop by! Everyone is welcome!



The news this month is pretty much the same as last month. There is interest in the 8-bit area, but the ST members have stopped coming to the meetings. We will continue to make our plans at the last minute and notify everyone by postcard during the week before the meeting. If you have any suggestions please call Bryant LaFreniere at (517) 835-2234 or Marty Schmidt at (517) 792-6029.

Our club will continue to exist, if only on an informal basis, because it's worth it just to get the AIM Magazine. There is \$344 in the treasury, and it is possible that those attending the meeting (both of us) will buy some software and have a raffle. I have a hunch the odds would be pretty good.

Steve Volker has made the necessary arrangements to get us a copy of Pagestream to raffle off. We will let you

know on the meeting notification postcard when we get it. Just in case these comments create a little interest, remember that the meetings are now on the second Saturday of the month.



The STargroup is a computer club specifically for helping members use their Atari STs. Our yearly dues are only \$15 and now include a quarterly newsletter along with a year's subscription to AIM. Other benefits include free access to our library of over 50 megabytes of LHARcd public domain and shareware programs for your Atari. The club BBS, the Bandersnatch, has had a fatal hard drive crash and thus no longer exists. We do have a message section on Lief's World (904) 573-0734 thanks to the generous sysop Lief!

There was a distinct lack of Atari news to discuss because of the incredible dissertation last meeting by Pat Augustine on the WAACE show. Pat did have his new 4 meg STe and treated us to some of the STe demos that require a working blitter (something I do not have if you are reading this, Mr. Brodie).

It looks like we will be meeting with the FACE user group either the 3rd or 4th Tuesday and the normal STargroup meeting will be the 1st Monday or Tuesday of each month. When they become firm, I will place the meeting dates here.

The STargroup meets on the first and third Tuesday of each month at La Mirada apts. off of Powers Ave. in Jacksonville, FL. Everybody is welcome.

President S. Michael Hallack (904) 646-0567
Vice Pres. Pat Augustine (904) 737-8452
Disk Librarian Jeff Holland (904) 737-8452
Sec/recruiter Bob Waddell (904) 737-1905



WAUG General Meeting Minutes 11-12-91

The meeting opened at 7:30 PM with our new Panasonic Panasyrch monitor displaying a demo of the new Taito game "Super Space Invaders." President Dave Brzezinski took this time to ask the assembled members for authorization to spend \$300.00 at the upcoming Chicago show for door prizes to be used at our monthly meetings. After a report from Treasurer Russ Crum revealed that plenty of funds were available, a motion was made and unanimously carried to spend the money.

Member Bruce Urbanski was then given the floor to run some demo programs to show off some of the sound and color capabilities of the STE. Bruce first showed an ST demo for comparison and then launched into a series of programs like "Boing STE" with stereo sound and 32 simultaneous colors, followed by the Lost Boys "Life's a Bitch" and "Ancool on Atari ST" that showed off the STE's hardware scrolling capabilities. An animation with stereo sound called "The Snowman," and a digitized stereo sound player with full controls were also presented for the audience. For those who know Bruce, you know that no demo would be complete

without an interesting game, and he managed to show several that showed off the STE's stuff.

The next topic presented was a solicitation from our President for interest in a group purchase of hardware for 8-bits. We need to purchase a total of 12 items from CSS and we can all then share in discounted pricing. Several members from MACE who were present promised to check at their next meeting to see if there is any interest at that club.

While Dave was talking to the group about the 8-bit hardware, the next demo was set up and ready. The same GIF picture was being shown at the same time on an 8-bit running "APACView," an STE in 16 glorious colors and finally on Pattie Rayl's TT at an astounding 256 colors. The picture looked good on the 8-bit and was very nice on the STE, but realism on the TT was truly amazing. Another GIF picture was shown on all three machines with the same results. The assembled members then began to ask questions about the software used, display colors and resolution of all of the machines used in the demo.

"MultiDesk Deluxe" was the next demo featured at this meeting. While Ken Antkowiak was setting up, Dave snuck in again with some business. Fortunately, it was the monthly door prize drawing which gave the lucky winner an Alpha Data mouse for the ST and the "Bookkeeper" package with a key pad and software for the 8-bit.

After the drawing Ken was ready and began to put "MultiDesk" through it's paces. He explained that this new version of a classic ST program would now allow you to up to 96

desk accessories for loading (more if one of the available slots were used to load "MultiDesk" into itself -- up to 132 times!) and the ability to hold 32 accessories in memory. The size of the memory buffer is fully reconfigurable from within the program, and you can have different configurations of memory and available accessories for different programs, and even for different screen resolutions if you so desire. Even though he stated that he had only used this program for a month, Ken recommended it very highly. Looks like another fine effort from Codehead Software living up to its promises.

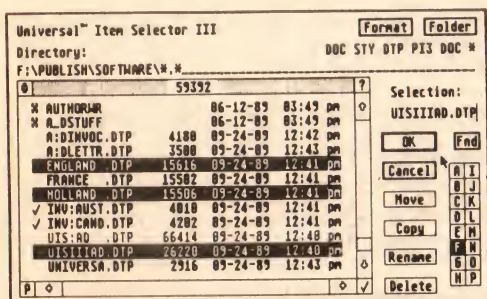
8-bit Librarian Dick Selke was next with the AIM 8-bit Disk-of-the-Month that contained a full featured BBS program for the Atari classic series of machines.

Mike Olin presented his fellow WAUG members with their choice of the WAUG #8 Utilities disk chock full of ST archiving programs, the WAUG #5 Music disc with MCS and Music Studio files, two game disks with a total of 12 games or the AIM Disk-of-the-Month with an "Avant Vector" demo, a "Multidesk Deluxe" demo, a PD program from a local programmer, and loads of other software.

The time for general question and answer brought inquiries from the members about new 8-bit programs as reported in AIM. Were they for real? According to Pattie, that in fact was the case. After very brisk disk sales, the meeting was adjourned at 9:45 PM.

Respectfully submitted,
Dan Cable, Secretary

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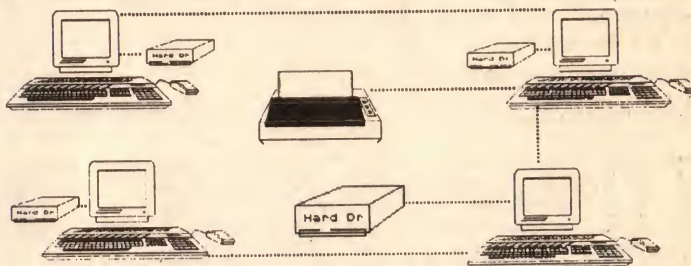
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☐ Mac/Spectre (12 DS disks) — \$50
☐ Atari 8-bit (12 SS/SD "flippies") — \$50

Sign me up for your Disk of the Month only. I am not an AIM subscriber.

- ☐ ST/Mega (12 double-sided disks) — \$60
☐ Mac/Spectre (12 DS disks) — \$60
☐ Atari 8-bit (12 SS/SD "flippies") — \$60

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These programs are offered from Authors who have worked long and hard to produce programs that have a narrow audience, but nonetheless, are needed by some users.



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"Splitter" By Travis Guy

Mini-Backup program for users who want a simple program to back up 1 partition or folder and set of files. Good GEM interface, easy to use. Easy program to save and restore files. Split files too large for single disk. Program is intuitive, lets you know how many formatted disks needed, rings bell when next disk needed, etc. Format backup disks without leaving program. Color or Mono, \$15 + \$2 P&H.

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compatible. Pricing for these systems is very competitive.

For long-time Atari enthusiasts like myself, the release of PC compatibles from Atari may be the financially saving move that keeps Atari in the green in the years to come. That possibility makes me excited. On the other hand, the Atari ABC line of computers are just more ho-hum PC compatible computers. I wish Atari success in their PC compatible ventures only to further development and promotion of their real power computers, the ST/Mega/TT line.

Portfolio

Also on display were numerous Portfolio computers and complementing accessories. A table was devoted entirely to the Portfolio, in addition to a display showing its use as a process controller. A light and small train were turned on and off by a controlling Portfolio, displaying the Portfolio as a very neat, compact device controller that is reprogrammable.

CDAR-505

The long, long awaited CD-ROM was on display. The CDAR-505 made for Atari by Chinon was being demonstrated by Carl Bacani from Computer Rock of San Francisco. Atari's suggested list price for the CDAR-505 is \$599.00. But what good is a CD-ROM drive without data and program disks? Well, the availability of disks are abundant for IBM and Macintosh computers. I'm told these data disks are accessible to the Atari ST/TT users with a front-end software load module that allows the ST/TT computers to read and utilize them. Atari-specific disks (numbering two now) will total seven by December 1991.

Mega STe/TT 1.44M Upgrade

TT030s were used in most of the software dem-

onstrations, prompting me to ask Bob Brodie about the validity of the rumored 1.44 MByte floppy disk drive upgrade for the Mega STe/TT. Apparently, Atari engineers had to reverse engineer the out-of-production Western Digital high-density floppy disk controller needed for this upgrade.

Socketed WD1772 controller chips were used in Mega STe and TT production to allow easy upgrade replacements. ST and STe owners will not be so lucky, since their drive controller chip is most likely soldered in and the source of the 16 MHz clock to run the new floppy controller is unavailable. Hopefully, some ingenious ST user will develop a method for retrofitting the older model STs for the rest of us.

STBook

The real hardware star of the Atari booth was the STBook. This notebook computer is not just a warmed-over STacy. No, it is a complete, newly-designed ST compatible computer. The STBook is a true, self-contained portable that features an amazing battery life of 10 hours!

TOS 2.xx improvements were made to accommodate the STBook, including a nice feature that will put the STBook to sleep after a user-defined period of inactivity or when the case is closed. The best part of this feature is that the currently active process is stored in memory upon sleeping, to be resumed when reactivated. Nice!

The STBook should come equipped in three different hard disk configurations—40, 80 and 120 Megabytes. Current plans are for all configurations to ship with one megabyte of RAM (non-user upgradeable). A future model will be offered with four megs of RAM.

The "mouse" is an arrangement of three buttons in the upper right side of the keyboard. The largest, middle button is a pressure sensitive mouse positioning



button. Rocking or pressing the button in the desired direction moves the mouse pointer the respective direction on the screen. Firmer pressing actions produce faster pointer movements. The two smaller buttons located closer to the keyboard are the left and right mouse buttons. Nothing different or special about these buttons, except their location.

The feel of this new version of a mouse is really different. I liked the responsiveness and could probably get used to it, maybe even prefer it. With TOS 2.xx in the STBook having keyboard equivalents, use of the mouse is really optional anyway (at least at the desktop), so I don't expect the "real" mouse-only users to complain. *[Ed: an external mouse can be connected to the STBook, also.]*

The connectors and interfaces in the STBook are quite different than other ST computers. In the back, behind a plastic cover, are the new mini-Centronic-style ASCII DMA port, standard ST parallel printer port, 9-pin RS232 IBM-style serial port, and a pair of mini-DIN MIDI I/O connectors.

On the left side of the STBook's chassis is an expansion connector for CPU bus-type peripherals, complete with mounting screws for physical stability. Of course, there is also the power connector for recharging the NiCad batteries and an AC adapter. All this is contained in an 8 x 11 x 1 inch case weighing in at slightly more than four pounds!

Some things are notably missing from the STBook, and for good reasons. The LCD screen is not backlit because of the power requirements. When given the choice between backlighting or long battery life, Atari opted for long battery life.

Also the floppy disk drive and even a floppy drive port are absent. The floppy controller is not included for the same power reasons. Atari will offer an ASCII floppy drive that will connect to the STBook at some future date to add floppy transportability and compatibility. Until then, loading the STBook's hard disk will require an external ASCII DMA transfer using the Atari supplied software and cable.

Other items left off the STBook are the numeric keypad, ST monitor plug, and the cartridge port.

Because the design concept of the STBook is to provide the ST/TT owner with a travelling portable companion computer, the lack of some standard ST peripheral connectors really should not be a concern. The gain for this small sacrifice is an extremely long battery life while maintaining compatibility with the ST computer line in a small, comfortable size.

The STBook on display was not an experimental or prototype model. Rather, it appeared to be in a production, consumer ready form. The displayed STBook was a very nice and refined product that was very impressive. My overall opinion is it will be a hit. Atari's expected availability for the STBook is February 1992.

Matrix Video Card

Another hardware product being used was the Matrix video VME card that fits into the TT030 and Mega STe. This card allows high resolution color displays as good or better than the new XGA IBM standard. Very impressive color pictures were displayed on a 19-inch Mitsubishi multisync monitor. This VME video card is available through a number of sources including Atari.

MIDI

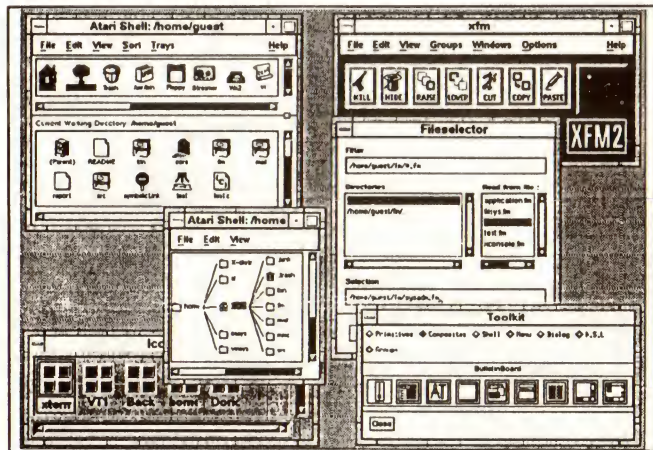
I can profess to *not* being a musician or even understanding music. However, I do know Atari enjoys respect and has a good reputation among musicians. As might be expected, MIDI music hardware and software were displayed in the Atari COMDEX booth. Serious MIDI demos like a direct-to-disk music hardware and software system and sound editing software were just two of the displays. Musically inclined readers should look to other Atari COMDEX reviews for further information.

Bundled Systems

Atari is ready to release bundled ST systems in time for Christmas. There are about three or four different system packages with software subjects like entertainment, grade school education, etc. Included in each kit is an STe and SC1224 monitor. The Discovery Pack includes a 520STe, SC1224 color monitor, four games, a paint program, BASIC and a desktop tutorial program. Another package, the Family Curriculum package, includes 1040STe, SC1224 and a slew of educational programs. Atari's nice software selections and low pricing of these systems are expected to bring in some new first-time ST buyers.

UNIX SYSTEM V

Atari TT030 Unix System V is now available to Unix developers. Atari is rightly very proud of hosting Unix System V on the TT030 computer. It is indeed an



accomplishment that could pay big dividends to the bottom line sales figures. Full industry/consumer release is expected in March 1992 when software is expected to be available to bring in immediate TT030 Unix System V sales. TOS will be available in ROM, using a operating system selection desktop routine.

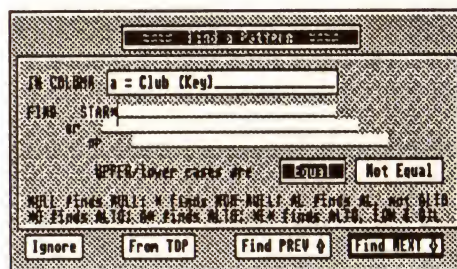
Software

Like any other computer, software is the power behind the hardware. The Atari COMDEX booth had some impressive software applications. The products mentioned below are the only ones I received information on because of their interest to me.

Didot Professional—The guys at Goldleaf Publishing must be scouring the world for the best of the best in ST/TT software, because that is exactly what they have in Didot Professional.

After about an hour-long personal demonstration, I decided Didot Professional has enough capability to satisfy, even overwhelm, print shop personnel. Every question or concern I could think up was successfully answered by Goldleaf's representatives. To me, Didot Professional appears to be one of those rare programs that give you the power today and tomorrow to accomplish any thing you want to do (and more). Didot Professional is serious software with a serious price tag, \$995.00.

Informer II—Todd from Soft-Aware, Unlimited was demonstrating the power and flexibility of Informer II. Unlike the typical hard-to-use PC compatible database, Informer II is extremely easy to use



while still retaining the high-end database product features the others offer (i.e., graphic import capability, multi-level linked records, lists and sublists, complex and logic sorts, etc).

Informer II has far too many features and capability to list here, but if you are in the market for a better and more powerful database (like me), then Informer II deserves your consideration. [Ed: See elsewhere in this issue for a complete review.]

Avant Vector—The most famous programmer duo for the Atari ST/TT computer—Charles Johnson and John Eidsvoog of Codehead Software—also manned an area of the Atari COMDEX booth. On display was Avant Vector, one of their newest professional products. Avant Vector is an excellent graphic conversion utility that converts Atari, Mac, PC or Amiga bit graphic images to vector images automatically for altering, refining, scaling, etc. What was once a laborious and time-consuming "manual" task is now automated. *Nice product.*

Genus—Also on display was Codehead's vector font creator for Calamus called Genus. Genus allows the creation and editing of fonts and other vector objects.

Chronos-3D—Lexicor Software provided demonstrations of Chronos-3D, their keyframe animator. Chronos-3D allows creation of complex animations by linking still frames into an animated "film." Another serious piece of software I'm sure graphics and animation buffs would find difficult to live without.

Attention GFA programmers.

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HyperLink—JMG Software International was displaying HyperLink on an Atari Mega STe. Just like last year, I remain impressed with the versatility and application potential this software has. I don't have to go out on a limb to predict that HyperLink will be a "must have" product for all ST/TT users. Seeing HyperLink in action would be all it would take to persuade you to lay your money down for this one. It's a valuable software asset for a fair price!

Other products on display were Calamus SL from ISD Marketing, Retouche graphics editing software from Goldleaf Publishing and others.

Gadgets by Small was not represented at this year's Atari COMDEX booth even though they were there last year and have been to other important shows this year.

The pen-based Atari computer called the STylus was also unavailable. Mr. Brodie explained the absence of the STylus was due to the great deal of handling it received at the German shows.

Conclusion

In comparing last year's Atari COMDEX presence with this year's, I would have to give the Atari group a much improved score. Product, professionalism, representation, information and image have all increased significantly over last year. The 1991 Atari COMDEX image was strictly professional, nothing but professional. I didn't even hear a squeak about the Lynx

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~~\$229.95~~ ~~\$279.95~~ with RAM chips

Z-RAM/Mega 2-to-4

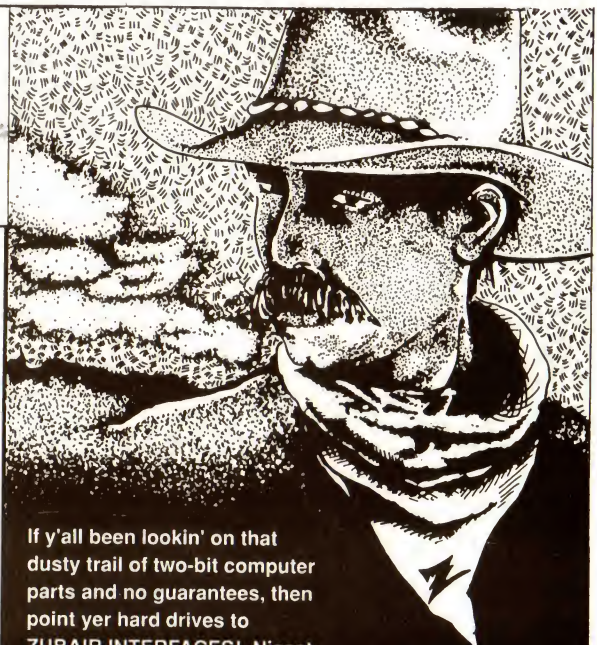
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~~4 MEG~~ ~~\$379.95~~ ~~\$379.95~~



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The Church Treasurer

A Complete ST Financial Management Package for Any Church Treasurer

Terry Quinn (P3ACE)

The Church Treasurer is a complete shareware package for use by any church or not-for-profit organization (at least ones that are intentionally setup that way).

Installing the program is fairly simple—all one has to do is make a folder on a hard drive (required), copy the contents of the disk onto it and you are in business. The data disk contains the three main programs, all the required data files and folders, and an extremely detailed set of instructions.

Before any use can be made of the package, it is very important to read the instructions thoroughly. The instructions assume you may not be familiar with either the Atari ST computer or the office of Church Treasurer.

One cardinal rule for automating any management activity is that if you aren't organized before you start, all you accomplish is multiplying chaos.

The creator of this system, William R. Austin, is apparently well aware of this truism, since the documentation deals at great length with the organizational details of how the office of Church Treasurer should be conducted.

In addition to these management recommendations, this package also includes a worksheet template which is extremely useful in ensuring each week's contributions are accurately recorded prior to entering them into the program.

There are four main programs in this package. One, called TREASURE.PRG, forms a common link between the others and provides

some security functions like passwords for the sensitive giving information. Two of the other programs, CONTRIB.PRG and INC_CKBK.PRG, do the bulk of the work. A fourth program called NEWYEAR.PRG resets the data files to begin each new year.

All these programs are customizable, even to the extent of being able to modify the fancy graphics title screens. Since these programs were not written to be unique to a particular denomination, the user must set up the various budget categories, gift funds and so on. The programs even include some custom backup options (and, in fact, force you to use them!) to make this often-ignored task easier to do.

The programs all have a common look and feel that, unfortunately, does not include the normal GEM drop down menus and windows. Instead, all menu selections are presented in the middle of the screen and respond to single keystrokes only. Once you get started, the mouse is neither needed or wanted.

Since this system was written in GFA Basic version 3.0, it could probably be implemented in the MS/DOS version of this language with little or no work, since it doesn't appear to take advantage of special Atari features. One other drawback is that the programs work in medium resolution only.

Finally, while it creates a terrific first impression due to the ability to customize the various screens and the foresight that went into the logic, there are some things the Church Treasurer does not do well.

Perhaps the most glaring omission is that none of the primary

modules support the accounting convention known as a reversing entry in case of mistake. Although the error checking employed by the program is quite good, it is very inconvenient to correct mistakes once they are found.

Contributions Module

The contributions program is usually the first one encounters in actual use. This program supports 10 "names" files of 100 families each. If a church has more than 100 families, it will be necessary to use more than one file.

While the ability to support multiple files is nice (sometimes churches have multiple suborganizations), the small fixed length of these files is a major inconvenience. A church must have more than 100 members in order to be economically viable in today's economy.

Because many churches support the concept of "pledges" as a planning tool, this program will track and even manage "pledges" for multiple purposes for each family unit. Of course, the program supports a large number of appropriate reports for reporting contributions; both to the Church and to each family (for tax purposes).

One important check for financial accuracy at this level is that total income (offerings) must match contributions. The program gets good marks for forcing this to be so, but exactly what to do about it if things don't match isn't entirely clear.

Of course, if the provided worksheet is followed, the likelihood of this happening is not very great.

Checkbook Module

The checkbook module is just what its name implies—a simple checkbook type of accounting system. One very nice feature is its ability to obtain information from the data files generated by the Contributions module, so reentering the income information is unnecessary.

Of course, the program also supports additional inputs apart from the family contributions program, so it doesn't give up any flexibility either.

Another very important feature that the checkbook supports is a line item budget or "fund" accounting feature. Every income or outgo item must be assigned to a category, and the checkbook keeps track of the status of each budgeting category on a weekly basis. This feature is, in itself, one of the best reasons to recommend this program, since most nonprofit organizations manage their finances in just this way.

In fact, the only financial management problems the program's author has not provided for are human ones which are beyond the purview of this program. The checkbook module also has the usual checkbook reconciliation routines, a generous assortment of hard-copy options and a fair assortment of useful utilities.

Conclusions

Is this package worth the \$20 shareware fee the author requests? Well, it depends on your situation. If

your organization has an Atari ST setup like the packages requires—hard drive and color monitor—and has a reasonably good paper system for financial management, the potential time savings after this program is first set up can be substantial. Even though it isn't perfect, it is well worth the effort to set it up and use it (a bigger investment than the shareware fee).

Can it be improved? Most certainly! A few minutes work with an accountant to implement "reversing entries" for error correction and the adoption of a resolution-independent, GEM-based display would be a substantial improvement in the versatility of this system.

As it stands right now, this program would be well worth the effort to "port" it to the MS/DOS platform as well, since most Churches contemplating automation will probably begin with a donated PC clone.

In fact, the only Churches that probably won't find this program useful are those who employ "shoebox" accounting or those who are large (and rich) enough to employ a professional financial officer.

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Shaded 80-Column Fonts

An Experiment in 8-Bits

Jerry Bridgman

I am a strictly 8-bit Atarian, but was interested in Jay Craswell's talk about grayscale fonts (Sex, Lies and Graphics/Video, November Atari Interface). A couple months ago, I tried something similar on my 800XL. My goal was to produce 80 columns of readable text on a color TV. Previously I had tried to accomplish this goal in Mode 8, the highest resolution mode available on my machine. I never got very far with this, and put it aside.

Then the idea of using Mode 15 occurred to me. Here you have four "colors" which can be converted to four shades of gray. However, you only get 160 pixels across the screen to work with. This means only two pixels per character for an 80-column text display. The Turbo-BASIC type-in program at the end of this article embodies this idea.

The program works by dividing each character in the standard Atari set into left and right halves. The ROM characters were made on an 8x8 grid, so any row in the grid can have anywhere from zero to eight dots turned on. A half row can have zero to four. This gives five possibilities, but we only have four shades. The program simply assigns the same shade to three and four dots. This is OK, especially since four-dots-on is not common.

The listing is short enough that I expect many people will be willing to type it in and give it a try. If you do so there are two things you need to know. First, the REM state-

ment in Line 91 is supposed to tell you how to type in the string in Line 90 (Control-comma, Control-A...). Second, when you first RUN the program, hold down any of the console keys. This causes the special Mode 15 font to be manufactured from the ROM character set and to be deposited in memory.

From there, all the program does is input a line of text from the user and print it on the screen in 80-column format. As written, the program will do one screen worth of characters. If you want to do more, punch the Break key and re-run it (without pressing a console key).

The Results

So, how does the text look? Well, if you know what it's supposed to say, then you can read it! But, if someone types in something weird or unfamiliar, then you might have problems.

Craswell mentions the alphabet was immediately recognizable in his 2x2, 16-shade font. I can make something like the same claim for my 2x8, 4-shade font. It is still not very practical for a word processing program or any application where you need to read the screen with total reliability.

As an example of the semi-legibility of text you get with this program, I have included a very familiar sentence with a very unfamiliar tag added on at the end. To display this sentence, press RETURN at the INPUT prompt. Owing to a glitch in Turbo-BASIC, you have to press RETURN twice initially.

I find the main sentence is decipherable at least, but the tag is not. Oh, in case you're wondering, I added the tag after watching MTV.

Actually I was a little disappointed it didn't turn out better. I have seen 80-column displays on TVs that were more readable than this one. Notable examples of this are provided by the cable channel Mind Expansion University.

I have seen MS-DOS and Lotus 1-2-3 demonstrated with a full monitor screen appearing at once. (Or almost—I have counted over 70 columns several times.) To be sure, not all the individual letters are legible—lower-case 'u' is an undifferentiated light spot, for example. But ordinary text is generally quite readable.

I suppose the reason for this is that broadcast TV, as opposed to 8-bit computer-driven TV, has twice the resolution because it uses twice as many lines.

Interlacing

Here, there is another tie-in with Craswell's article: Under the heading "VGA Chip Sets" he mentions the inferior (nauseating) display you get with interlacing. This is no doubt true in general, but I sure have seen better screen displays on television than anything I have seen from my computer.

By "better" I mean "more detailed and refined." If you look closely at a weather map, or any of countless other fancy displays on TV, they are often a-buzz with flickering highlights. And yet, these are not usually upsetting to the stomach or even the eye when viewed from a normal distance! My point is that it would be nice to have the power of interlacing even if it took exceptional skill to use it well.

Optimized shaded text might also require exceptional amounts

of RAM, at least more than you might think. This is because the correct "shape" for a character could depend on what characters are present on either side of it. Thus, you might well find that a shaded "font" would require several versions of some of the letters.

By the way, how is it possible for the XEP-80 to produce a higher resolution mode through a joystick port?? Could a similar device get us the interlacing I mentioned above? How 'bout it, you techies? I seek enlightenment.

I mentioned that the program is in the public domain. While writing this little program I came across a glitch in Turbo-BASIC (TB) of which I was previously unaware. Look at line 60. This line establishes the initial address for the new Mode 15 font, just below the display list.

This is an unconventional place to put data, because it is unprotected from BASIC. I did it this way because the more usual way doesn't work very well in TB. The "usual way" is to lower the RAMTOP pointer

at location 106 and issue a GRAPHICS command. In Atari BASIC, the screen memory is snuggled up under the new RAMTOP leaving an opening in RAM that BASIC won't touch.

TB has apparently eliminated the "snuggling" routine. To make a long story short, you must reserve space at the top of RAM in multiples of 16 pages (four kilobytes). That's quite a chunk on a 64K machine, so I decided to experiment with the method mentioned at the start of this paragraph.

Finally, you might want to experiment with other Atari screen fonts. There are a zillion of these available. After the GRAPHICS statement in Line 20, but before Line 40, load in another font and point location 756 at it. It would be interesting to see how much difference a different starting font would make to the final Mode 15 shaded font.

Jerry Bridgman
3722 Zwerg Dr.
Madison WI 53705

```

10 C=10:C=C*16
20 GRAPHICS 15:COLOR 3
30 POKE 708,C+4:POKE 709,C+8:POKE 710,C+12:POKE 712,C
40 CHPG=PEEK(756)
50 CH=CHPG*256
60 NARROWPG=PEEK(561)-4
70 NARROW=NARROWPG*256
80 DIM CONVERT$(120)
90 CONVERT$="♥♥♥♥♥♥♥♥♥♥"
91 REM * ctl-,AABABBCABBCBCCC
100 IF PEEK(53279)=7 THEN 200
110 FOR I=0 TO 1023 STEP 8
120   B=I/8:A=B&127:CHR=B+32*(A<64)-64*(A>63 AND A<96)
130   ? B,CHR
140   FOR J=0 TO 7
150     A=PEEK(CH+I+J)
160     B=(A&240)/16+1:C=A&15+1
170     P=(ASC(CONVERT$(B))*4+ASC(CONVERT$(C)))*16
180     POKE NARROW+I+J,P:NEXT J
190 NEXT I
200 POKE 87,8
210 INPUT CONVERT$
220 IF LEN(CONVERT$)=0 THEN CONVERT$="The quick brown fox jumps over
the lazy dog! Yo he do!"
230 *F :FOR I=1 TO LEN(CONVERT$)
240   POKE 756,NARROWPG
250   TEXT X,Y,CONVERT$(I,I):X=X+4
260   POKE 756,CHPG
270 NEXT I
280 Y=Y+8:X=0
290 GOTO 210

```




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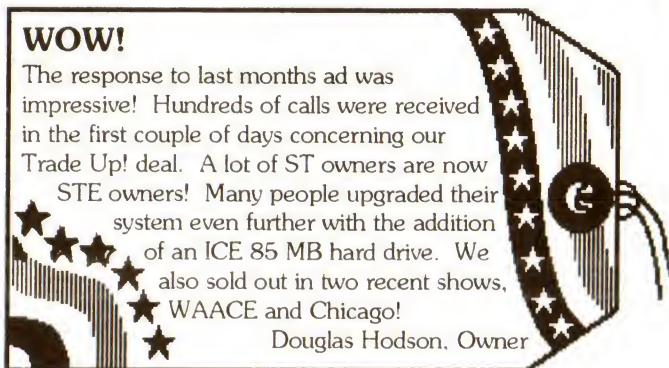
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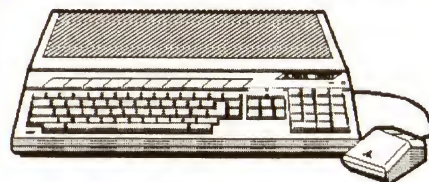
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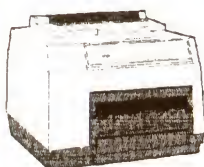
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DeTERM TELECOMMUNICATIONS PROGRAM FOR THE ATARI CLASSIC 8-Bit

Ellen Lentz (ACCT)

DeTerm is a telecommunications program written entirely in assembly language for the Atari Classic computers (XL, XE, 400/800) with 48K and at least one disk drive. It is a Shareware program written and copyrighted by Jim Dillow, and it's available on GENie, CompuServe, etc.

There are several versions of the program—DeTerm SX212 for the SX212 modem, DeTerm XM301 for the XM301 and 1030 modems, DeTerm 850 for Hayes or compatible modems connected to an 850, P:R or MIO, and DeTerm MPP for the MPP modems plugged into joystick port #2.

Each version has a built-in handler which relocates to LO-MEM on boot. There is also a DeTerm for Hayes compatible modems which has no booter or handler—you have to supply your own handler for this version.

To use a modem, there are two requirements. You must load a terminal program into your computer and you must connect to either another computer with a terminal program loaded or to a Bulletin Board System (BBS). A BBS is basically a very enhanced version of a terminal program.

To use DeTerm, you must first configure it, saving the results in a DEFAULT file which will then be loaded at boot-up time. You can prepare a PHONE.LST file containing the phone numbers you wish to dial, which will also be loaded at boot-up time. This file must be named in a file called LIST.BAT.

Print or read the documentation

file called DETERM.DOC (which comes with the DeTerm package) for instructions to create this file. MODEM.BAT is a "set up" file that allows you to send commands directly to your modem before running DeTerm. (Consult your modem documentation to see what commands you can send.)

To boot DeTerm with DOS 2.0 or 2.5, you should construct a boot file containing DOS files and DeTerm, then rename the DeTerm file to AUTORUN.SYS. (See DETERM.DOC for booting with SpartaDOS.) Boot your computer (modem on) with the disk in Drive 1, with BASIC disabled.

DeTerm includes extensive use of windows and drop-down menus. Most of the documentation is in Help files. It is suggested these files be placed on a separate disk which must be in Drive 1 when accessing them. After booting DeTerm, you can remove the program disk from Drive 1 and put in the Help file disk.

After booting DeTerm, you will notice the menu line at the top of the screen, which contains the following:

ONLINE R:DEV MODEM DISK ETC QUIT

Whenever the menu line is displayed, you can choose the menu by pressing the OPTION or SELECT keys or using the arrow keys. Display your menu by pressing START or RETURN, or press the first letter of the menu you wish to access.

The menu window under the header will open and you'll see the supported commands. Pressing the Help key ("?) at any menu, gives a brief summary of the commands, if the Help files are in Drive 1. Press-

ing Escape causes an immediate jump to Terminal mode. Pressing SELECT in Terminal mode returns to the Main Menu.

To become familiar with the program, it's a good idea to boot DeTerm up with your modem turned off. Then, place the Help files in Drive 1. At each command, press "?" for the instructions. To see what information is required, press START or RETURN. Press SELECT to exit without inputting any data. (Be sure to have backup copies of your disks, just in case.)

You may wish to print some of the longer help files for reference while becoming familiar with the program. The Terminal help file is 10A. Go to DOS, choose copy, and type HELP.10A,P: to send this file to your printer.

Return to DeTerm by choosing Binary Load—AUTORUN.SYS. Other help files are Upload, 12A; Download, 13A; and Capture, 14A.

While in the terminal mode the following items appear on the Status line: On or Off (Word Wrap); Full or Half (Duplex); Atari or Ascii (Translation); Current Baud Rate; Number of Bytes in data buffer or the words Full, Upload, Download, or Send (Buffer); and time on-line (Timer).

You can change the settings for the first three Status items by using Control/Shift in combination with another key. For instance, Control/Shift/W toggles Word Wrap, while using the letter 'T' toggles Translation and 'D' toggles Duplex.

Note: Duplex should be FULL if communicating with a BBS and HALF if connecting computer to computer. (If no text appears, or letters are doubled, simply choose the other setting.)

Other Shift/Control key combinations include:

- F—Flip game screen.
- G—Flip game screen and reset bricks.
- R—Reset time to zero.
- S—Take snapshot of entire screen and put in buffer.
- Clear—Reset buffer count to zero. Data in buffer will be lost.
- Escape—If capturing to disk, then the data buffer will be saved and the file closed.
- 1-5—Send macros 1-5 to modem.

Current settings for the following are saved in the default file when you use the *write* option in the ETC menu:

- Download Batch Drive—Online Menu, Down option.
- Upload Protocol—X-Type menu.
- Download Protocol—X-Type menu.

Baud Rate—R:Dev menu.

Translation—R:Dev menu.

Edit Window—Term menu.

Dial Mode—Modem menu, Mode option.

Connect Wait—Modem menu, Wait option.

Drive Numbers—Disk menu, Drive option.

Margin—Etc menu.

Color—Etc menu.

The ONLINE Menu includes commands to upload or download a file, capture text to disk or send text directly from disk to the host computer (BBS), save data in buffer to disk, view or print data in the buffer or a file, and zero out data in the buffer.

The MODEM menu contains options for dialing a phone number from the keyboard, accessing or creating a list of phone numbers, maintaining a list of PC Pursuit City nodes and functions for various modem settings.

The DISK menu allows you to select default source and destination drives; get a directory of the source drive (you can also press 1-9 from any menu selection); copy, move, rename, lock, unlock, erase, view or print a file without going to DOS; and format a disk.

The ETC menu allows you to set left-hand margin, change screen and text colors, and read or write the Defaults file. This menu also contains information (Option N/A) about the Command Line Interface between SpartaDos and XL/XE computers, as well as a binary file loader (HELP.54A).

Don't be afraid to experiment. It takes time to learn a new program. The HELP files can all be viewed, and the configuration files created, without turning on the modem. Even if you don't have a modem, viewing this program might help you decide to get one. Once you have configured your files, the program is very simple to use. There is even a game you can play during long uploads and downloads.

If you enjoy this program send a contribution to:

Jim Dillow
P.O. Box 2552
Sarasota, FL 33578.

For further information you can contact him on CompuServe or GENie. Remember, it's contributions from Shareware authors like Jim that keep the Atari Classic alive. DeTerm can be freely distributed if you include all Help files and modules.

If you have a program you would like to learn how to use, or one that you would like to have reviewed in AIM, send a copy of the program and all documentation to the address at the end of this paragraph and I'll see what I can do with it. I've been having quite a good response to these articles, but am always looking for something to write about.

Ellen Lentz
512 Pauly Dr.
Perrysburg, OH 43551
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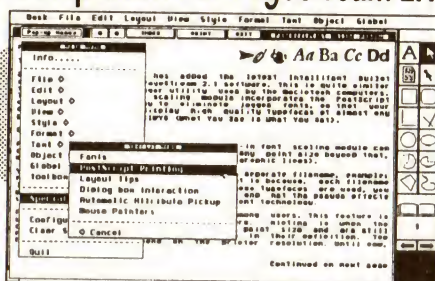
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Programming in Michtron Command Language

A Tutorial for Michtron BBS 3.0 Sysops

Have you ever called a new Bulletin Board System and found it to be the same as all the other Bulletin Board Systems using that software that you have called before? The only difference is in the Message Base topics and what type of systems the BBS supports.

Tim Purves, author of Michtron's BBS, has created a Bulletin Board System that is as flexible as the System Operator's imagination. Michtron's Bulletin Board System (MBBS) is written entirely in a language called Michtron Command Language, or MCL for short.

This allows you to make changes to the BBS as you desire, or as your knowledge of programming in MCL will allow. What I hope to accomplish in these articles is to familiarize you with programming in MCL.

Getting Started

Before we get started, I would like to tell you about MBBS if you are not familiar with it. MBBS v3.0 is a multi-line, multi-tasking BBS. What does this mean to you?

It means that, while one or more callers are logged on, you can be logged on doing whatever you like at the same time. The caller may be downloading a file while you are reading your mail or even doing system maintenance. This makes your BBS a true 24-hour BBS.

I have been programming in MCL for about 18 months now. After having a degree in Computer Science, I thought MCL would be easy to learn and code. Some of the obstacles I encountered quickly changed the way I programmed.

For example, MCL only deals in Integer numbers. This means you cannot use a number greater than 32,767 or less than 0, and the result of all arithmetic functions will always be in integer form, no decimals.

One other major tool missing from MCL is the ability to use arrays, some-

thing most programmers take for granted. Aside from those differences, MCL was modeled after C and has most of its features. MCL does not use line numbers.

Learning MCL will also aid you in Structured Programming, which may be defined as the construction of programs from smaller programs that are either structured programs themselves or made up of a number of particularly well understood control structures.

A Global Approach

All variables in MCL have a "Global" scope—once you set a variable to a specific value, that value will be the same until you change it. If you write a program that calls another program, then the variables you set in the calling program will be the same in the called program. This is very helpful when you start writing programs that call upon other programs to get the result you want.

When coding MCL, you will be able to use 28 *numeric variables* and 28 *string variables*. These variables consist of a one letter identifier, with a string variable having a trailing dollar sign(\$). For example, *a* is a numeric variable which may be set from 0-32767, while *a\$* is a string variable which may equal up to 79 characters in length. When defining a string variable, you must put quotes around the string.

Numeric Example: *a* = 374

String Example: *a\$* = "Your Name"

If you accidentally assign a string to a numeric variable, or vice versa, you will be reminded during the compiling of your program with a compiling error.

Abbreviations

The following abbreviations will be used throughout this and following articles:

Jeff Wells

**Learning
MichTron's
Control
Language will
also aid you in
structured
programming.**


```

expr = Numeric Expression
var  = Numeric Variable
sexpr = String Expression
svar = String Variable

```

Assigning values or strings to either var(s) or svar(s) is very simple and yet complex. For example:

```

var = expr  Assigns expr to var (a = 3 + 4)
var += expr Adds expr to var (a = a + 5)
var -= expr Subtracts expr from var (a = a - 5)
var *= expr Multiplies var by expr (a = a * 5)
var /= expr Divides var by expr (a = a / 5)
svar = sexpr Assigns sexpr to svar (a$ = "Joe")

```

These six examples are going to be the most commonly used ways to assign values. There are others that we will talk about in future articles.

Labels and Subroutines

Let's talk about *labels* and *subroutines*, or procedures. A label is like a book marker, or a reference point, and is usually used for error trapping or to identify a point within a program. A sub-routine or procedure is a section of code within a program you might use more than once.

When calling a subroutine, the flow control of the program passes to the identified routine, the subroutine code is processed, and then control is returned back to the source that called it.

An example of labels and subroutines might look like this (the lines of text between */** and **/* are comments):

```

Start_here:; /* This is a label and subroutine. */
...         /* notice the colon followed by a */
...         /* semi-colon. This identifies */
...         /* either a label or subroutine. */
if(a > 7)
    print("Your number");
    a += 1;
...
return; /* The "return" tells the computer to
return to the calling program at the line directly
below the 'GOSUB' command. Notice the trailing
semi-colon. */

```

In this example, the label "Start_here" is also a subroutine due to the following "return." This routine checks to see if the variable *a* is greater than 7 and then displays the message. Regardless of the outcome, it adds 1 to the variable *a* and returns to the calling program. This is not a common use for a subroutine, but a good example of one.

Maintaining flow control of your program impacts the outcome desired. Flow control statements are commonly known as 'Loops'. MCL supports four different types of these loops. In the following examples, we will attempt to obtain the same results using the different types of loops.

IF/ELSE—This loop will check a condition. If the condition is met, it will execute the following code. If

the condition is not met, it will execute the code under the ELSE, if there is one.

```

a = 1;          /* Set starting value of a to 1 */
start_loop:;    /* Label */
if(a == 7)      /* Condition */
    /* IF Condition is TRUE */
    print("\n",a," Your lucky number");
else            /* IF Condition is FALSE */
{
    print("\n",a); /* print value of 'a' */
    a += 1;        /* Add 1 to variable 'a' */
    goto start_loop; /* Goto our label above */
}

```

If you are going to execute more than one process after checking a condition, you must enclose the processes with { and }, like in the ELSE example above. When we checked for a TRUE condition, we did not have to enclose the print statement with { and }. When the condition was FALSE, we did have to enclose because there were multiple processes to execute.

WHILE—This loop checks the condition in the beginning of the loop and executes all processes within the enclosing brackets.

```

a = 1;
while(a < 7)          /* Condition */
{
    print("\n",a);    /* Condition was TRUE */
    a += 1;
}
print("\n",a," Your lucky number.");
/* Condition was FALSE */

```

In this example, we are checking the condition *a < 7* in the WHILE command. If the variable *a* is less than 7, we print a carriage return (\n), and then we increment our variable *a* by 1. When this statement becomes FALSE—when our variable *a* is equal to 7—we print a carriage return, the value of our variable and then the message.

The main point to remember with a WHILE loop is that it checks the condition first. The condition must be met before any of the code within the WHILE loop is executed. This does not mean that you cannot have another loop within the WHILE.

REPEAT/UNTIL—The difference between a REPEAT/UNTIL loop and a WHILE loop is that a REPEAT/UNTIL loop checks the condition at the end of the loop, forcing the loop to execute at least once, while the WHILE loop checks condition first and may exit before it executes at all.

```

a = 1;
repeat
{
    /* Loop executes at least once */
    print("\n",a);
    a += 1;
}
until(a > 7) /* Condition */
print("\n",a," Your lucky number.");

```


This gives you the required results, but forces the program to loop through the code at least once. Even if *a* was greater than 7 to begin with, this code would add 1 to it.

FOR—The **FOR** loop assigns the variable, sets the condition and sets the incrementing value all in one step.

```
for(a = 1; a < 7; ++a)
{
    print("\n",a);
}
print("\n",a," Your lucky number.");
```

In this example, we set variable *a* to 1, gave the condition of 'if *a* < 7 execute the following', and told the loop to increment *a* by 1.

Loops are very powerful when coding your program, especially if you are doing repetitive coding. Deciding which loop to use depends on when you want to check the condition of the loop.

Exiting Gracefully

If you are in a **FOR**, **REPEAT** or **WHILE** loop, you cannot exit by using a **GOTO** statement. You may, however, use **GOTO** statements within the loop, as long as you have the **LABEL** within the loop.

Exiting a **FOR/REPEAT/WHILE** loop can only be done in two ways—either the condition is met or you use a **BREAK** command. The **BREAK** command stops the loop in all cases.

A **CONTINUE** command in a **FOR** loop will jump to the incremental expression statement of the loop (in our example, that was the **++a** statement). In a **REPEAT** or **WHILE** loop, the **CONTINUE** command jumps to the top of the loop. There may be up to 16 unsatisfied **BREAK/CONTINUE** commands in your code during compilation.

System Stuff

There are 32 unique System Variables pertaining to each user on your BBS. These range from the user's address, phone, number of uploads and downloads and so on. These system variables are categorized as *string read only*, *integer read only*, *integer* or *STRING*. If a system variable is *read only*, that's exactly what it means—you can only read these variables and not assign them values. The *integer* and *string* variables can be assigned new values by you during your program.

There are also 78 System Procedures/Functions you can use during your coding. The difference between a System Procedure and a System Function is that you cannot assign a System Procedure to a variable. System Functions may be assigned. In other words, System Functions return a value while System Procedures do not.

For example, *display_user()* is a System Procedure. You would not want to assign *a = display_user()*. On the other hand, you might want to assign a variable to

the *disk_free(sexp)* function before receiving an upload, as in *a = disk_free("c:\ \upl\ \");*.

About the Author—Jeff Wells is sysop of the Lone Star BBS in Killeen, Texas, (817) 690-1993, 12/2400 baud. Jeff has authored a number of games and utilities for Michtron's BBS, including *NFL Yesterday*, *ProduceM* (Movie Madness), an online dating service and an MCL version of *Space Empire Elite*, a popular FoReM BBS game.



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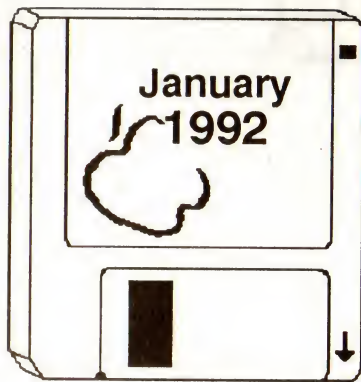
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Here are some more samples of the EPS clip art drawings available from Computer Safari. These are from Volume 1 of the Clipables collection of over 600 EPS images.

Volume 1 contains images placed into several categories. Categories include: Animals, Business, Dingbats, Display Banners, Famous People, Holidays and Humor.

Clipables can be purchased from Computer Safari, 606 W. Cross, Woodland, CA, 95659 or phone (916) 666-1813.





AIM Mac/Spectre Disk of the Month

Each AIM Mac/Spectre Disk of the Month is a double-sided disk packed with some of the best PD and Shareware programs available each month. The disks are available in either Macintosh or Spectre formats. All files are self-extracting archives. Just double click to extract!

Here is a short description of the files contained on the January '92 Mac/Spectre Disk of the Month:

DeskZap—DeskZap allows you to set Finder info for a file; remove LFs and other formatting codes from text files; delete, copy, rename or move HFS folders; move files to different folders, and much more, all in DA form.

FlashWrite—FlashWrite][1.03 is a word processor in a DA. Supports a Find feature, word/paragraph count, multiple fonts and text styles and much more.

GIFwatcher—This desk accessory lets you view GIF images while you are downloading them. Save time by cancelling images you don't want. Also has a dithered black-and-white mode for viewing GIFs on a monochrome system. Version 2.0 adds features for fast viewing of existing GIF files, conversion to PICT format, color dithering (great for desktop images) and more. Version 2.0.1 adds automatic opening of new GIFs.

Household Shopper—Household Shopper 2.2 can save you money by helping you become a better

shopper. Lots of built-in text teaches you better shopping habits. Use the program to create shopping lists from over 2,000 items, track coupon usage, etc. Item information can be fully customized. Excellent interface and very easy to use.

PicaCalc 2.0—DA with special features for DTP. A programmable scientific calculator with a twist, PicaCalc uses algebraic entry with any combination of U.S. or metric measurement and/or typesetting units. Sports 16 digits, transcendental functions, Polar/Rectangular conversions, clipboard, 10 non-volatile memories, conditional branching, user defined functions, user defined prompts and more. Save pica programs for later use!

System Picker—System Picker lets you switch between different System Folders easily. It can help ease the transition to a new System setup by letting you keep multiple Systems in the same volume.

To Do!—The To Do! DA is an attractive, well-done program for keeping track of your daily activities. Easy-to-use and very handy. Save individual To Do lists for multiple topics and even print the lists for hardcopy reference.

UPS Shipper—A complete UPS shipping program. Eliminate the need for UPS books! Prints labels and COD tags. All Zones are incorporated, including International. Great for small businesses.

Readers can purchase this disk by sending \$6 (\$5+\$1 s/h) to Unicorn Publications, 3487 Braeburn Circle, Ann Arbor, MI 48108. Please specify the January '92 Mac/Spectre Disk and which format when ordering.

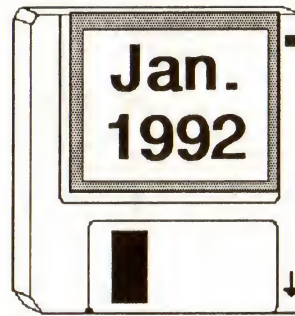
Also, we have another special Games disk for January. The January '92 Mac/Spectre Games Disk contains a single game, but it's a great one. The game takes up a whole disk!

Drakmyth Castle—Designed exclusively for the Mac 512K, Plus, 512Ke, SE, and Classic, this very excellent game is also great for Atari/Spectre owners. Assume the identity of the bold peasant as he dares to venture from his village in an attempt to defeat the ominous castle's sorcerer who cursed the village with a deadly plague. Lots of good graphics, nasty monsters and creepy sounds in this graphic adventure.

This file is ready-to-run; no need to extract this game. (It was so large even when compressed that we couldn't find another game to fit on the disk!) Readers can purchase this disk by sending \$6 (\$5+\$1 s/h) to Unicorn Publications, 3487 Braeburn Circle, Ann Arbor, MI 48108. Please specify the January '92 Mac/Spectre *games* Disk and which format when ordering.

NOTE: This Games disk is not part of a standard subscription to our Mac/Spectre Disks of the Month. If you are a disk subscriber and want this disk, you must purchase it separately.

AIM ST/Mega Disk of the Month



All files on this disk are self-extracting LZH archives created with Double Click's Self-Extracting ARC program DC SEA! To use these programs, simply double click the files. Then, click on Extract and select the drive/folder to which you want the extracted files saved. Click on Verbose to get a list of the files in each archive or Exit to abort.

Here's a short description of the files on the January '92 disk. For more complete docs, see the text files contained in most of these archives.

BOB.APP—A program for your AUTO folder that displays Bob (from the Church of the Sub-Genius) when you boot up. Silly? Yeah. Pointless? Maybe. But hey, it's FreeWare from @Ircular Logic (c)1991. "@Ircular Logic, cut us some slack."

CAL602.APP—Version 6.0.2 of Bill Aycock's popular Calendar desk accessory. Lets you look at any month/year and schedule events by date, position, or every so many days. All new screens, more room to describe each event, cyclic events, save/load/merge events, keyboard shortcuts, auto conversion from previous versions, and much more!

CALPRINT.APP—CalPrint is a program that generates a one-month-per page calendar. Version 1.5 adds the ability to output to a text file for editing and extensive notes capability, including multiple note files for any month. Handles any year from 1900 through 3000. ShareWare from Chris Sorensen. Free future updates for registered users of 1.5.

DOORS.APP—Michtron BBS 3.0 MCL file from Jeff Wells. DOORS.M automates generation of a Games menu for your Michtron BBS. By using this module, you only have to update a text file whenever you add a new game to your system!

EDWIN APP—Incredibly small text editor ACC/PRG from Clear Thinking's Craig Harvey. Edwin essentially allows you to create/edit one window worth of text (2K), but the program is just 6K (takes a whopping 10K of RAM). For writing short notes, addressing envelopes, etc. Edwin can be useful for anyone tight on RAM. If you're not tight on RAM, buy EdHak from Clear Thinking and get a full-blown editor that can edit ANYTHING.

EPD10.APP—The Extended Palette Driver 1.0 is a complete replacement for the driver that JRI shipped with their 4096 color card. The EPD was written at the request of Prism Paint owners so they could access the larger palette. Since the program patches all necessary XBIOS and VDI calls to work with 4096 colors, other well-written GEM applications should also benefit. This pro-

gram is freeware from Robert Birmingham, the author of Prism Paint.

GAZETEER.APP—Gazeteer is a US Atlas that contains a volume of info on the US, including ZIP Codes, Area Codes, Timezones, Maps and much more! Program written by Dave Stuart.

JETON.APP—This tiny ACC "kick-starts" your DeskJet if you forget to turn it on before you boot your ST. Great for when you've designed the perfect page, but realize your DeskJet isn't on! Uses only 350 bytes of RAM, runs in any resolution on any ST/STE/TT. Another great program from Bill Aycock.

MARROW.APP—Marrow is a unique program that enables you to use your mouse from within non-GEM programs. Marrow allows you to switch your mouse into 'keyboard mode' to emulate the cursor keys, and then back again at the touch of button. A very small program that is a must for every ST owner that uses any TOS programs.

METCON APP—A US <-> METRIC converter. Very extensive. Includes temperature, distance, area, mass and volume conversions. Bi-directional. Another great program from Dave Stuart.

MOUSEBT2.APP—A very nice system bootup/configuration program that works on all systems and all resolutions, from the TT on down. Selected your auto programs, desk accessories, assign.sys files, desktop.inf/newdesk.inf files and more.

NFL_YEST.APP—Michtron BBS 3.0 online game. NFL Yesterday allows your callers to coach their favorite NFL team, playing against the computer head-to-head or against other callers. With 28 teams, complete stats and lots more, this is a game your callers will really like! Written by Jeff Wells.

RACKEM.APP—Three games in one: pool, billiards and snooker. Runs in ST low resolution on ST/STE/TT. GFA basic source code and instructions included.

RAPSHEET.APP—The Rapsheet time logging program allows you to keep track of time spent on various tasks (on your computer or elsewhere). Breaks tasks down by type (work, play, etc.). Great for keeping records of how much of your computer is used for work and how much for play (for tax reasons). Also great for recording time spent on various tasks at work for billing purposes. Version 1.3 adds complete logging of when each task was started.

REALRAY APP—A ray tracing program written and compiled in GFA BASIC. Runs in ST low resolution ST/STE/TT. You set up a scene with spheres, walls, floor, ceiling and light sources as required. Objects can have degrees of reflectivity and refraction and can be colored. Creates very realistic pictures.

REVERSI.APP—Demo of CPX Reversi, a control panel extension from @Ircular Logic. It is a demo only in the sense that it allows four uninterrupted games before it starts reminding you it is a demo. Otherwise, it's fully functional. Register your copy

to get rid of those annoying reminders! Must have XCONTROL.ACC to use this CPX.

SEE_V20.APP—Another great Michtron BBS 3.0 online game from Jeff Wells! Space Empire Elite MCL brings the popular FoReM game of galactic conquest to MBBS. Players build their empires, spy on their neighbors, support covert strikes against their enemies and lots more. If you run Michtron's BBS and support online games, this is a MUST HAVE!

SHREDR2.APP—A major update to Shredr+, the file deletion utility from DO NOT STAMP Software. Shredr+ ensures your privacy by permanently deleting files from your disks. Too many features to list here, but this version adds an all-new GEM interface, supports MaxiFile III's "backdoor", and is over three times faster than the previous version. Color/Mono supported. Fully functional Shareware.

SONGFILE.APP—Catalogue your music/video collection with the Songfile database from Andy Osborne. This UK import gives you the ability to build a list of all your records (albums, EPs and singles), tapes, CDs, DATs and videos. Search by song, artist, album title, and more. Print a complete index of your collection, for individual albums, etc. Runs in ST medium or high resolution on all machines from ST to TT.

SWITCH APP—Switch is a neat little ACC from Russia that changes the system font to give your ST a more Mac-like appearance. Also, pressing LSHIF+RSIFT gives you access to the second half of the character set. The Russian Cyrillic characters are stored in ASCII locations 128-255. Works on ST/STEs in all resolutions, including Mega/STE. Does not work on the TT.

VANITY.APP—A Vanity Plate CPX. Great for the next time you need to use the computer and your spouse/roommate says "I don't see your name on it." Pop open the Vanity Plate control panel extension and show 'em! Freeware (c) 1991 from @Ircular Logic. You must have XCONTROL.ACC to use this CPX.

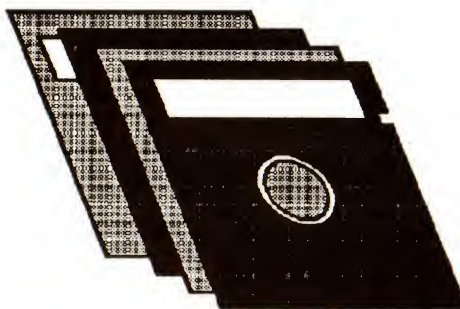
WHATIS52.APP—Whatis version 5.2 identifies over 100 file types—ARCs, LHArCs, PRGs, plcs, ACCs, animations, etc...no more "what kind of file is this?" problems! Runs as a PRG or ACC (just rename the file) on any ST/TT in any resolution. Short docs included. This version adds PFX and AFX files, Newdesk XIC icons, SDS DJ and Printer Utils setup files, and MSDOS EXE and COM files. PLUS, Whatis can now act as a "file type server" for other applications!

Readers can purchase this disk from their local AIM Participating user group or by sending \$6 (\$5 + \$1 S/H) to Unicorn Publications, 3487 Braeburn Circle, Ann Arbor, MI 48108. Please specify the January '92 ST disk when ordering.

AIM

Atari Classic (8-bit) Disk

January, 1992



Each AIM 8-bit Disk of the Month is a single-sided, single-density "flippy" packed with software. To extract files in the ARC format, you need the UNARC.COM utility and to decompress files with a DCM extension, you need DISKCOM3.UTL (available from most BBSes, user groups or on the April/May '91 AIM 8-bit Disk).

ATARIMNU.ARC—An excellent disk menu program that allows you to load/run program files or BASIC files. Lots of options. Complete docs included. NOTE: Tested with Atari DOS 2.5 only...DOS 2.5 included on this disk for your convenience.

BUNNY.DCM—Bunny Busters is an arcade shoot-em-up from the military personnel at Fort Huachuca, Arizona. Shoot the jackrabbits and other critters as they scurry across the screen. But, watch

out...some of those critters can shoot back!

HURPLOT.DCM—Gulf Hurricane Plotter comes from the New Orleans Atari User Group. Plot the path of your favorite hurricane(s). A nice educational tool with excellent graphics.

MEISTER.ARC—A Simon-like game. Try to match the sound and color pattern, using the joystick. Can get pretty hard in just a few rounds. Three different play modes available.

SHADEDFT.ARC—Turbo BASIC program accompanying J. Bridgman's "Shaded Font" article in the Jan. '92 issue of Atari Interface.

Side 2

DRAW7XEA.ARC—A very nice graphics drawing program designed for the Atari xE (or other Atari Classic computer with at least

128K of memory and BASIC XE). This arc contains Side 1 of a disk, minus DOS. UnARC this file to a newly formatted disk with DOS 2.5 written to it. Then, reboot to use the program.

DRAW7XEB.ARC—Docs and demos to go along with DRAW7XEB.ARC. UnARC this file to side two of your Draw XE disk.

TPJOY.ARC—A very handy little program from John McGowan. This VBI-driven routine adds joystick scrolling capability to TextPro. Now, you can use the joystick to scroll quickly around your text! Includes docs and source code.

Readers can purchase this disk from their local AIM participating user group or by sending \$6 (\$5 + \$1 S/H) to Unicorn Publications, 3487 Braeburn Circle, Ann Arbor, MI 48108. Please specify the January '92 8-bit disk when ordering.

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Foreign — \$48 for 1 year, \$80 for 2 years

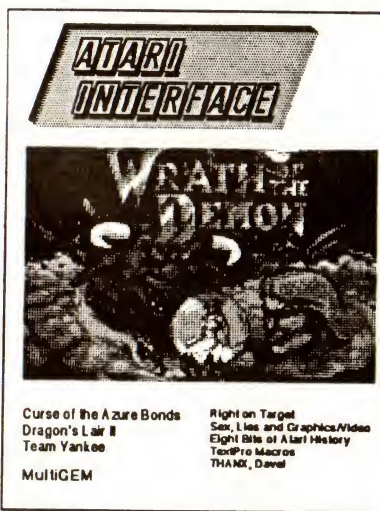
Please make check or money order payable in US funds to Unicorn Publications, 3487 Braeburn Circle, Ann Arbor, MI 48108.

I wish to receive your Disk of the Month. I am an AIM subscriber.

☐ ST/Mega (12 double-sided disks) — \$50
☐ Mac/Spectre (12 DS disks) — \$50
☐ Atari 8-bit (12 SS/SD "flippies") — \$50

Sign me up for your Disk of the Month only. I am not an AIM subscriber.

☐ ST/Mega (12 double-sided disks) — \$60
☐ Mac/Spectre (12 DS disks) — \$60
☐ Atari 8-bit (12 SS/SD "flippies") — \$60



**Your Connection to the
Atari User's Community**

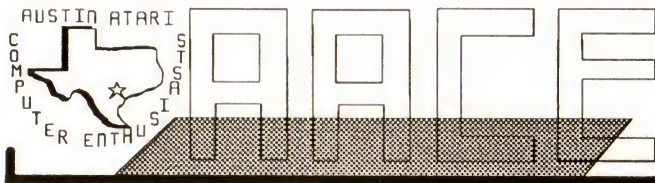
**Supporting Atari 8-bit and
ST/Mega/TT computers**



Club Name: Alamo Area Atari User Association
 Acronym: AAAUA
 Address: PO Box 79-1426, San Antonio, TX 78279
 Meetings: Balcones Heights Community Center, 107 Glenarm, San Antonio, TX. 107 Glenarm, San Antonio
 Day: 1st Tuesday of each month
 Time: 6:30-9:30 PM
 Founded: 1979
 Dues: \$24; Subscribing: US-\$16, CAN/MEX-\$36 (\$14 no AIM), Other-\$54 (\$18 no AIM)
 System(s): Atari 8-bit
 Contact: Al Sherrill (512) 492-6633
 Benefits: Library of around 700 disks. (FR)ANTIC monthly newsletter. Swap meet and computer workshop each 3rd meeting.



Club Name: Albuquerque ACE
 Acronym: AACE
 Address: 1021 Sagebrush Trail SE, Albuquerque, NM 87123
 Day: General: 1st Sat and 3rd Tues, 8bit: 2nd Tues
 Dues: \$20/yr payable in January
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Richard Houser (505) 299-3977
 BBS #s: Astro BBS: (505) 260-0448
 Benefits: PD library access, BBS membership. Swap meet on 1st Sat. of June and December.



Club Name: Austin ACE
 Acronym: AACE
 Address: 305 Meadow Creek Dr., Round Rock, TX 78664
 Day: 1st Wednesday of each month
 Founded: August 1981
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Chris Davis (512) 388-1974
 Benefits: C classes for ST and 8-bit.



Club Name: Atari Boosters League East
 Acronym: ABLE
 Address: PO Box 1172, Winter Park, FL 32790
 Meetings: Orlando Public Library, Palm Magnolio Room 101 E. Central Blvd., Orlando FL
 Day: Last Sunday of each month
 Time: 1:30-4:30 PM
 Dues: \$12/yr

System(s): Atari 8-bit and ST/Mega/TT
 Contact: Hadley Nelson (407) 671-0317
 Benefits: Access to the ABLE Program Library of User Software (ABLE PLUS) and ABLE AID newsletter.



Club Name: Atari Clubs of Denver
 Acronym: ACCD
 Address: PO Box 24064, Denver, CO 80224
 Meetings: ACD/STIG: Aurora Public Library, 14949 E. Alameda Ave. STarfleet: Pamona HS, 8101 W. Pamona Dr.
 Day: ACD: 1st Tues.; STarfleet: 2nd Fri.; STIG: 3rd Tues.
 Time: 7:00 PM
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Guy McDaniels (303) 238-2366
 BBS #s: (303) 343-2956 3/12/2400
 Benefits: ACCD is an umbrella group for ACD, Starfleet and STIG.



Club Name: ACC of El Paso Texas
 Acronym: ACCEPT
 Address: 245 Longhorn Court, El Paso, TX 79907
 Founded: June 1988
 Dues: \$20
 System(s): Supports Atari 8-bit, ST/Mega/TT, Macintosh and IBM
 Contact: Steve Bruck
 BBS #s: STEP, (915) 755-STEP STE-EP BBS, (915) 821-9220
 Benefits: Discounts from Jenkins' Computers, special STE-EP access.



ACCESS

Atari Computer Club Encompassing Suburban Sacramento

Club Name: ACC Encompassing Suburban Sacramento
 Acronym: ACCESS
 Address: PO Box 1354, Sacramento, CA 95812
 Meetings: SMUD Training Building, Classroom B 1708 59th St., between Folsom Blvd. & R St., off Hwy 50.
 Day: 1st Wednesday
 Time: 7:30 PM
 System(s): Atari 8-bit
 Contact: Bob Drews (916) 423-1573
 BBS #s: ACCESS BBS, (916) 428-8662



Club Name: ACC of Toledo
Acronym: ACCT
Address: 4487 289th, Toledo, OH 42611
Meetings: Dave & Brenda Micka's home.
Day: 1st Wednesday
Time: 7-9 PM
Founded: 1980
System(s): Atari 8-bit and ST/Mega/TT
Contact: Dave & Brenda Micka (419) 729-1891
BBS #s: Disk Drive-Thru BBS, (419) 885-3441
Benefits: Disks \$2 8-bit, \$4 ST

Atari Exchange of Louisville

Club Name: Atari Exchange of Louisville
Acronym: AEL
Address: 317 Norbourn Blvd, Louisville, KY 40207
System(s): Atari 8-bit and ST/Mega/TT
Contact: Lawrence Estep (812) 944-8997



ATARI COMPUTER OWNERS RESOURCE NETWORK FORT WAYNE, INDIANA

Club Name: Atari Computer Owners Resource Network
Acronym: ACORN
Address: 3627 Iowa Court, Fort Wayne, IN 46815
Meetings: Shawnee Branch of the Allen County Public Library
Day: 1st Saturday
Time: 10AM-1PM
Founded: 1981
Dues: \$18
System(s): Atari 8-bit and ST/Mega/TT
Contact: Ken Helms
BBS #s: (219) 744-1396 3/12/24/9600
Benefits: Three Rivers Festival, PentaCon, ICE Kid's Conference Participant.



Club Name: Atari Computer Owners of Rochester NY
Acronym: ACORN
Address: PO Box 23676, Rochester, NY 14692
Meetings: Brighton HS, 1150 Winton Rd. South, Room 262S.
Day: 2nd Wednesday
Time: 7 PM
Dues: \$20/yr (add \$6 for AIM)
System(s): Atari 8-bit and ST/Mega/TT
Contact: Don Allis (716) 293-3415

BBS #s: Dimension's End - (716) 436-3078 3/12/2400
Benefits: ACORN Kernel newsletter, AtariUser, extra BBS access. ST Beginners and 8-bit Basically Speaking classes held before general meeting.



Club Name: Atari Computer Users Network
Acronym: ACUNET
Address: 2662 E. Nob Hill Dr. SE, Salem, OR 97302
Day: 4th Tuesday
Time: 7 PM
Dues: \$15 with AIM, \$10 without
System(s): Atari 8-bit and ST/Mega/TT
Contact: Ron Purdy (503) 588-7509
BBS #s: Salem Public Lib. - (503) 588-6130, Page BBS - (503) 363-0171, The Jungle - (503) 393-4274.

ACE OF ST. LOUIS

Club Name: ACE of St. Louis
Acronym: ACE of SL
Address: PO Box 3508, St. Louis, MO 63143
System(s): Atari 8-bit and ST/Mega/TT
Contact: Dick Pederson (314) 644-7168



Club Name: Atari Federation
Acronym: AFED
Address: PO Box 5367, Vandenberg AFB, CA 93437
Meetings: Vandenberg Federal Credit Union, Vandenberg Village branch, Lompoc, CA 93436.
Day: 1st Monday
Time: 7 PM
Founded: March 1984
Dues: \$10/single, \$15/family
System(s): Atari 8-bit and ST/Mega/TT
Contact: Phil Rominger (805) 736-7147

ASTMUM ATARI ST/MEGA USERS (Montreal)

Club Name: Atari ST/Mega Users of Montreal
Acronym: ASTMUM
Address: PO Box 966, Station B, Montreal, PQ H3B 3K5 CAN-ADA
Founded: 1987
System(s): ST/Mega/TT, MIDI Specialists
Contact: Kest Carter-Morgan (514) 272-6631
Benefits: Emergency repair, laser printing & graphics services, discounts on computer and MIDI equipment, Audio Recording & Music Tech course discounts and MUCH MORE!



Club Name: Bay Area AUG
 Acronym: BAAUG
 Address: PO Box 4637, Santa Clara, CA 95054
 Meetings: Agnew Development Center Auditorium, Lafayette & Montague Exp. Santa Clara, CA.
 Day: 1st Monday
 Founded: 1979
 Dues: \$20
 System(s): Atari 8-bit, ST/Mega/TT and Portfolio
 Contact: Robert Kaczanowski (408) 946-2271
 BBS #s: (408) 986-0215

BAKERSFIELD ACE

Club Name: Bakersfield ACE
 Acronym: BACE
 Address: PO Box 40203, Bakersfield, CA 93384
 Meetings: Pizza Hut, 3017 Wilson Rd., Vons Shopping Center
 Day: 3rd Tuesday
 Founded: Jan. 1982
 Dues: \$18/yr Full, \$12/yr Regular, \$6/yr BBS
 System(s): Supports Atari 8-bit, ST/Mega/TT, Mac, IBM and Portfolio
 Contact: Tim Hobbs (805) 837-2726
 BBS #s: (805) 831-5350



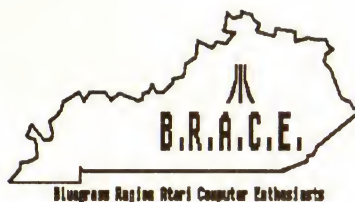
Birmingham Atari Computer Enthusiasts

Club Name: Birmingham ACE
 Acronym: BACE
 Address: 5822 5th Terrace S., Birmingham, AL 35212
 Meetings: Vestavia Hills Public Library
 Day: 2nd Monday
 Time: 7 PM
 Dues: \$15/Regular, \$25/Advanced
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Alan Brewster (205) 591-9906
 BBS #s: Matrix BBS, Co. #7, (205) 323-2016 Matrix BBS, (205) 251-2344
 Benefits: Advanced includes AIM 8bit or ST monthly disk

Bournemouth and Poole Atari Group



Club Name: Bournemouth and Poole AUG
 Acronym: BaPAUG
 Address: 248 Wimborne, Oakdale, Poole, Dorset BH15 3EF ENGLAND
 Day: 1st Friday
 Time: 7:30 PM
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Colin Hunt
 Benefits: 8:16 Newsletter



Club Name: Bluegrass Region ACE
 Acronym: BRACE
 Address: 151 Todds Rd. #240, Lexington, KY 40509
 Meetings: Conference Room B, Lexington Free Public Library, Downtown Branch Conference Room B
 Day: 3rd Tuesday
 Time: 7-9 PM
 Founded: April 15, 1986
 Dues: \$15/individual, \$20/family, \$10/associate
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Hal Nason (606) 269-8989
 Benefits: Associate membership includes AIM but not library access.

BRAG ST



Buffalo Region Atari Group for ST's

Club Name: Buffalo Region Atari Group for STs
 Acronym: BRAG*ST
 Address: PO Box 1035, Buffalo, NY 14225
 Meetings: Erie Community College, North Campus, Room S-105 in the Student Center.
 Day: 3rd Thursday
 Time: 7:30PM
 Founded: 1987
 System(s): ST/Mega/TT
 Contact: Mark Pierro (716) 691-7844
 Benefits: Monthly raffle. Board of Directors, 1st Thurs. at Your Host Restaurant, Harlem at Sheridan, 7PM.



Club Name: Cascade ACE
 Acronym: CACE
 Address: PO Box 6161, Jackson, MI 49204
 System(s): Atari 8-bit, ST/Mega/TT and IBM

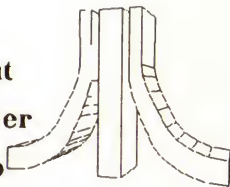


COOKEVILLE ATARI COMPUTER ENTHUSIASTS

Cookeville, Tennessee

Club Name: Cookeville ACE
 Acronym: CACE
 Address: 280 Capshaw Drive, Cookeville, TN 38501
 Meetings: Putnam County Library, Cookeville, TN.
 Day: 1st Saturday
 Time: 1PM
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Dan Hale (615) 526-8002

Central
Connecticut
Computer
Club



Club Name: Central Connecticut Computer Club
Acronym: CCCC
Address: 127 Pinnacle Rd., Bristol, CT 06010
Meetings: 127 Pinnacle Rd., Bristol, CT.
Day: 3rd Wednesday
Time: 7:30PM
Dues: \$25/yr normal, \$30/yr family
System(s): Atari 8-bit and ST/Mega/TT
Contact: Rich Scheldel (203) 589-3738



CDACC
CENTRAL DELAWARE
ATARI COMPUTER CLUB

Club Name: Central Delaware ACC
Acronym: CDACC
Address: 3117 Walnut St., Dover, DE 19901
System(s): Atari 8-bit and ST/Mega/TT
Contact: Tom Baldwin



Capital District ATARI Computer Enthusiasts

Club Name: Capital District ACE
Acronym: CDACE
Address: Box 511, Delmar, NY 12054
Meetings: Computer Cellar in the Westgate Plaza, Albany, NY.
Day: ST: Last Wednesday, XL/XE: Quarterly meetings
Time: 6:30PM
Dues: \$20/year
System(s): Atari 8-bit and ST/Mega/TT
Contact: Bob Thompson (518) 439-5356
Benefits: ST disks \$2, free XL/XE library access.



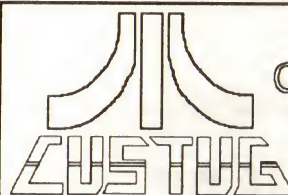
Dedicated to Central Oregon Atari Users and Enthusiasts Since 1986

Club Name: Central Oregon Atari Club
Acronym: COAC
Address: PO Box 6824, Bend, OR 97708
Meetings: Ann Rita Conference Center (in front of the St. Charles Hospital on Neff Rd.), Bend, OR.
Day: 1st Saturday
Time: 5PM
Founded: 1986
Dues: \$20/yr new, \$17/yr renewal, \$1/yr for each additional family member.
System(s): Atari 8-bit and ST/Mega/TT
Contact: Bob Stiles (503) 389-5206

CRAG

Calumet Region
Atari Group

Club Name: Calumet Region Atari Group
Acronym: CRAG
Address: PO Box 10995, Merrillville, IN 46411
Meetings: Broadway Music, Greentree Plaza, 1509 W. 81st (US-30), Merrillville, IN.
Day: 2nd Wednesday
Time: 7PM
Dues: \$15/yr
System(s): ST/Mega/TT
Contact: Jeff Coe (219) 663-5117
Benefits: ST disks \$2.50 each for members, \$4 non-members



Champaign-Urbana
ST Users Group

Club Name: Champaign-Urbana ST User Group
Acronym: CUSTUG
Address: PO Box 3442, Champaign, IL 61820
Meetings: Urbana Free Library Auditorium, corner of Elm and Race, Urbana, IL.
Day: 2nd Wednesday
Time: 7PM
Founded: January 1987
Dues: \$24/yr
System(s): ST/Mega/TT
Contact: Lee Johnson (217) 356-7916
BBS #: Blackhawk's Keep - (217) 892-5512 3/12/2400
Benefits: AtariUser magazine

Cuyahoga Valley Atari Computer Club



Club Name: Cuyahoga Valley ACC
Acronym: CVACC
Address: PO Box 9173, Akron, OH 44305
Meetings: First National Bank, Mogadore, OH.
Day: 2nd & 4th Tuesday
Time: 7:30PM
Founded: June 1980
Dues: \$20 family
System(s): Atari 8-bit and Mega/ST/TT
Contact: Don Crano (216) 376-7618
Benefits: Discounts at local computer stores, club newsletter
The Password



Club Name: Diablo ACE
Acronym: DACE
Address: c/o J. Dickerson, PO Box 673, Diablo, CA 94528
Meetings: Contra Costa County Water District Bldg, 1331 Concord Ave, Concord, CA.
Day: 1st Thursday
Time: 7PM
Founded: 1983
Dues: \$20/yr
System(s): Atari 8-bit and ST/Mega/TT
Contact: Dan Howlett (510) 827-3805



Club Name: Eastside AUG
Acronym: EAUG
Address: 2425 Crislisa Dr., Alton, IL 62002
Meetings: Alton Square Mall Community Room, Alton, IL.
Day: 1st Monday
Time: 7PM
Dues: \$18/yr newsletter membership
System(s): Atari 8-bit and ST/Mega/TT
Contact: Hank Vize (618) 465-0342
BBS #s: Eastside BBS - (618) 254-6077, Garage BBS - (618) 344-8466
Benefits: EAUG-Log club newsletter Member of Midwest Atari Regional Council consortium

FACCS

First Atari Computer Club of Spokane

Club Name: First ACC of Spokane
Acronym: FACCS
Address: PO Box 5121, Spokane, WA 99205
Meetings: Eager Beaver Computers, next to the Garland Theatre, Spokane, WA.
Day: 2nd Thursday
Time: 7PM
Dues: \$15/yr family
System(s): Atari 8-bit and ST/Mega/TT
Contact: Tim Osborne (509) 624-1917



Club Name: Fort Leavenworth Atari Group
Acronym: FLAG
Address: PO Box 3233, Fort Leavenworth, KS 66021
System(s): Atari 8-bit and ST/Mega/TT
Contact: Jeff Yoe (913) 682-2883

FRACUS Fresno Regional Atari Computer Users Society

Club Name: Fresno Regional Atari Computer User Support
Acronym: FRACUS
Address: PO Box 379, Prather, CA 93651
Meetings: Four Seasons Mobile Home Park Recreation Room, Fresno, CA.
Day: last Saturday
Time: 6PM
Dues: \$20/yr or \$5/qtr
System(s): Atari 8-bit
Contact: Tom Hancock (209) 885-2817



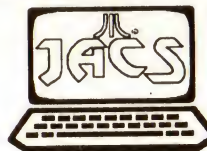
Club Name: Grand Rapids Atari Systems Supporters
Acronym: GRASS
Address: 624 Dickinson SE, Grand Rapids, MI 49507
Meetings: Wyoming Public Library, 3350 Michael S.W., Grand Rapids, MI.
Day: 1st Wednesday
Time: 7PM
Dues: \$22/yr
System(s): Atari 8-bit
Contact: Rick Harris



Club Name: Golden Triangle AUG
Acronym: GTAUG
Address: 2508 San Jacinto, Beaumont, TX 77701
Day: 1st Tuesday
Dues: \$24/yr (Sept. renewal)
System(s): Atari 8-bit, ST/Mega/TT, Macintosh, IBM, MIDI
Contact: Carl Neblett (409) 755-6535
BBS #s: (409) 722-6526



Club Name: Houston ACE
Acronym: HACE
Address: PO Box 460212, Houston, TX 77056
Meetings: Health Economics Corp., 2400 West Loop S., Houston.
Day: 4th Wednesday
Time: 6:45PM
Dues: \$22/year
System(s): Atari 8-bit, ST/Mega/TT
Contact: Bill Kithas (713) 855-0815
BBS #s: (713) 458-9923
Benefits: UPDATE ATARI newsletter, store discounts, door prizes, workshops.



Club Name: Jersey Atari Computer Society
Acronym: JACS
Address: PO Box 710, Clementon, NJ 08021
Meetings: Camden County Library
Day: 3rd Tuesday
Time: 7-9PM
Dues: \$24/yr (August renewal)
System(s): Atari 8-bit and ST/Mega/TT
Contact: Mike Hopkins (609) 783-1423
BBS #s: (609) 346-1224
Benefits: Between Bytes newsletter, AtariUser available at meetings Send SASE (business size) for copy of current ST or 8-bit disk catalog.

KAUG

Kent Atari User's Group

Club Name: Kent AUG
 Acronym: KAUG
 Address: 153 Oxley Dr., Chatham, Ontario N7L 4R3 CANADA
 Meetings: North Maple Village Mall on Highway #40, just north of Chatham.
 Day: 4th Tuesday, Sept-May
 Dues: \$20/yr
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Channel One Computers (519) 351-0760
 BBS #s: KAUG BBS - (519) 351-3901



Club Name: Layton ACE
 Acronym: LACE
 Address: 3897 S. 2275 W., Roy, UT 84067-3515
 Meetings: Clearfield Library basement, Roy, UT.
 Day: 2nd Wednesday
 Time: 7PM
 Dues: \$20/yr
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Irwin Brooks (801) 731-1516



Long Island Atari Users Group

Club Name: Long Island AUG
 Acronym: LIAUG
 Address: PO Box 92, Islip, NY 11751
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: John Aalto (516) 589-6754
 BBS #s: STar Scan - (516) 399-4252



Montreal ATARI Club ATARI de Montréal

Club Name: Montreal Atari Club Atari de Montréal
 Acronym: MACAM
 Address: PO Box 5418, St. Laurent, PQ H4L 4Z9 CANADA
 Meetings: Monkland Recreational Centre, 4410 West Hill, N.D.G., Montreal, Quebec.
 Day: 8-bit: 1st Thursday, ST: 3rd Thursday
 Dues: \$25 8-bit, \$30 ST, \$35 both (Canadian)
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Terry Cowen (514) 696-3773
 Benefits: Disk-based newsletter, free AIM disk access, AtariUser magazine



MACE

Club Name: Michigan ACE
 Acronym: MACE
 Address: PO Box 2785, Southfield, MI 48037
 Meetings: Southfield Civic Center, Room 115, at 10-1/2 Mile and Evergreen, 1/2 mile south of the Evergreen exit on I-696.
 Day: 3rd Tuesday
 Time: 7:30PM
 Founded: 1979
 Dues: \$20/yr
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Ted Newkumet
 Benefits: Send \$2 for current ST or 8-bit disk catalog.

M*A*S*H

Club Name: Memphis Atari Systems Hobbyists
 Acronym: MASH
 Address: 3265 Austin Peay Hwy., Memphis, TN 38128
 Meetings: State Technical Institute in the Fulton Auditorium.
 Day: 2nd Monday
 Time: 7PM
 Founded: 1983
 Dues: \$24/yr (renewal in July)
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Randy McKinna (901) 388-3384
 BBS #s: MASH COM - (901) 377-1904 3/12/24



Club Name: Mid-Ohio AUG
 Acronym: MAUG
 Address: PO Box 134, Ontario, OH 44862
 Meetings: A&B Computers, 1151 Park Ave. W., West Park Shopping Center, Mansfield, OH.
 Day: 3rd Saturday (except July)
 Time: 7-9PM
 Dues: \$12/yr
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Chuck Steinman (419) 529-2478 after 5PM
 BBS #s: DataQue BBS - (419) 529-5197 3/12/2400
 Benefits: Members can access AIM ST and 8-bit disk files on the BBS. AtariUser available free to members at A&B. Back issues of AtariUser available for \$1 each.

Middle Georgia



Atari Users Group

Club Name: Middle GA AUG
 Acronym: MGAUG
 Address: 115 Feagin Mill Rd., Warner Robins, GA 31088
 Meetings: Warner Robins Public Library
 Day: 2nd Sunday
 Time: 1PM
 Founded: June 1988

Dues: \$5/yr with newsletter optional
System(s): Atari 8-bit, ST/Mega/TT and Portfolio
Contact: Pete Miller (912) 328-8758
Benefits: Club library use is free to all paid members. Participates in annual show at local mall.

MidWest★STar

Club Name: Midwest STar
Acronym: Midwest STar
Address: 1107 W. 88th St., Kansas City, MO 64114
Founded: December 1985
System(s): ST/Mega/TT
Contact: Gary Leach (913) 236-9643

NAPCO

Club Name: Nittany Atari Personal Computer Organization
Acronym: NAPCO
Address: 642 E. Waring Ave., State College, PA 16801
System(s): Atari 8-bit and ST/Mega/TT
Contact: Greg Brown (814) 238-4255



Club Name: Nashville AUG
Acronym: NAUG
Address: PO Box 121752, Nashville, TN 37221
Meetings: Cumberland Museum and Science Center
Day: 3rd Tuesday
Time: 7-10PM
Founded: 1982
Dues: \$24/yr full; \$12/yr associate
System(s): Atari 8-bit and ST/Mega/TT
Contact: Walt Sullivan (615) 228-7353
BBS #s: Nashville Exchange - (615) 383-0727 3/12/24/9600
 Troll's Cave - (615) 872-0757 12/2400

NCAUG



Club Name: National Capital AUG
Acronym: NCAUG
Address: 15 Blueridge Court, Nepean, Ontario K2J 2J3 CANADA
System(s): Atari 8-bit, ST/Mega/TT, Macintosh
Contact: Hardy Zeltins (613) 825-4196

O-ACEs



Club Name: Omaha ACEs
Acronym: O-ACES
Address: PO Box 723, Papillion, NE 68046
Meetings: La Vista Recreation Center, 8116 Parkview Blvd. (just off 84th St., south of Food-4-Less and east of 84th at the light.)
Day: 2nd and Last Wednesday (except Nov. & Dec.)

Time: 7:30PM
System(s): Atari 8-bit and ST/Mega/TT
Contact: Pete Killian (402) 592-5427

O'HAUG



Club Name: Ol' Hackers AUG
Acronym: OHAUG
Address: 3376 Ocean Harbor Dr., Oceanside, NY 11572
Meetings: Plainview Library, Plainview, NY.
Day: 2nd Saturday
Founded: 1985
Dues: \$24/yr
System(s): Atari 8-bit
Contact: Alex Pignato (516) 678-6081
Benefits: Charter member of NEAR*US user group consortium.



Club Name: Pikes Peek and Poke ACE
Acronym: P3ACE
Address: PO Box 17779, Colorado Springs, CO 80935-7779
Meetings: Rustic Halls Mall Community Room, SE corner of Academy and Palmer Parkway.
Day: 8-bit - 1st Tuesday, ST - 4th Thursday
Founded: 1982
Dues: \$15/yr family
System(s): Atari 8-bit and ST/Mega/TT
Contact: Rick Reaser (719) 380-8082
BBS #s: Wildcat Orphanage - (719) 392-6631, Last Castle - (719) 390-9837, Bruce Faulkner's - (719) 574-7406
Benefits: Club has a Hayes 300 baud and Atari SX-212 1200 baud modem for loan to members. AtariUser available at club meetings, AIM 8-bit disks 50 cents to members.

PAC

Club Name: Portland Atari Club
Acronym: PAC
Address: PO Box 1692, Beaverton, OR 97005
System(s): Atari 8-bit and ST/Mega/TT
Contact: David Hunt (503) 286-6276
BBS #s: ACE of America - (503) 285-4417



Club Name: Ports ACE
Acronym: PACE
Address: 4835 Crosley Ave., Duluth, MN 55804-1219
Meetings: Duluth Radisson Hotel, check local BBSes for exact location.
Day: 3rd Sunday
Time: 6:30PM
Founded: March 1985
Dues: 8-bit \$20/yr, ST/Mega/TT \$30/yr
System(s): Atari 8-bit and ST/Mega/TT
Contact: Tracy Hendershot (218) 525-1058
Benefits: Free copying of ST/8-bit PD libraries, free use of MacInker, free monthly disk

PHAST

Club Name: Phoenix Area ST
 Acronym: PHAST
 Address: PO Box 56413, Phoenix, AZ 85079
 Meetings: Room #101, Devry College, 2149 W. Dunlap Ave., Phoenix, AZ.
 Day: 2nd Saturday
 Time: 10-12PM
 System(s): ST/Mega/TT
 Contact: Wayne Myers (602) 264-5737



WE'RE NOT JUST PLAYING GAMES ANYMORE!

Club Name: Rockford ACC
 Acronym: RACC
 Address: 3902 15th Ave. 1, Rockford, IL 61108
 Meetings: Springbrook Congregational Church, off Alpine just as you make the turn onto Springbrook Rd. from Spring Creek Rd., Rockford, IL.
 Day: 3rd Saturday
 Time: 9AM-Noon
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Andy Learner (815) 397-5316

RACE

Club Name: Raleigh ACE
 Acronym: RACE
 Address: 4360 Hunters Club Dr., Raleigh, NC 27606
 Meetings: Announced on Galaxy BBS, look under Bulletins for "A word from the president of RACE"
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Lewis Midyette (919) 828-4319
 BBS #s: Galaxy - (919) 552-0974

Rattlesnake Atari Computer Enthusiasts



Club Name: Rattlesnake ACE
 Acronym: RACE
 Address: Box 364, Frenchtown, MT 59834
 Meetings: National Guard Armory, 2501 Reserve St., Missoula, MT.
 Day: 3rd Sunday
 Time: 7PM
 Founded: 1983
 Dues: \$16/year
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Tom Tucker (406) 626-4410
 Benefits: Membership includes free PD disk.



Club Name: Rushmore ACE
 Acronym: RACE
 Address: 9512-A Adams, Ellsworth AFB, SD 57706

Meetings: Rapid City Public Library
 Day: 4th Saturday
 Time: 2PM
 Dues: \$12 basic, \$15 newsletter
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Rick Burton (605) 642-5353



Club Name: Real Atari Maniacs
 Acronym: RAM
 Address: PO Box 112, Camarillo, CA 93011
 Day: 3rd Wednesday
 Founded: 1981
 Dues: \$25
 System(s): ST/Mega/TT
 Contact: Timothy McCoy (805) 482-4988
 Benefits: Member of ACENET consortium, active at the Glendale show.

S.A.G.E.



Club Name: Spectrum Atari Group of Erie
 Acronym: SAGE
 Address: PO Box 10562, Erie, PA 16514-0562
 Meetings: St. John's Lutheran Church, Erie, PA.
 Day: 3rd Sunday
 Time: 2PM
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Dennis McGuire (814) 833-4724



Club Name: ST Atari League of San Antonio
 Acronym: SALSA
 Address: PO Box 18731, San Antonio, TX 78218-0731
 Meetings: Balcones Heights Community Center, 107 Glenarm, San Antonio, TX.
 Day: 2nd Tuesday
 Time: 7-10PM
 Dues: \$20 w/AM, \$15 regular
 System(s): ST/Mega/TT
 Contact: Kyle Miller (512) 945-9469
 Benefits: Club newsletter, discounts, Disk of the Month for \$2, New user classes.

SALSA

Acronym: SALSA
 Address: PO Box 1342, Sault Ste. Marie, MI 49783
 Contact: Roger Aube (705) 759-3922

SCAT SUBURBAN CHICAGO ATARIANS

AN INDEPENDENT COMPUTER USERS GROUP

Club Name: Suburban Chicago ATarians
 Acronym: SCAT
 Address: PO Box 72266, Roselle, IL 60172
 Meetings: College of Dupage, Student Resource Center on Lambert Rd. between Roosevelt and Butterfield, Glen Ellyn, IL.
 Day: 1st Saturday (check SCAT BBS for changes)
 Time: 10AM
 Dues: \$20/yr family
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Alvin Riesbeck
 BBS #s: SCAT BBS - (708) 231-7227



Club Name: San Diego ACE
 Acronym: SDACE
 Address: PO Box 900076, San Diego, CA 92190
 Meetings: General: North Park Recreation Center Social Room, 4044 Idaho St. ST/8-bit Workshops: North Park Adult Center, 2719 Howard St.
 Day: General: 3rd Monday, Workshops: 1st Thursday
 Time: 7PM
 Dues: \$18/yr
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Michael Bergman (619) 558-7866
 BBS #s: (619) 689-8157 3/12/2400
 Benefits: SDACE newsletter, increased BBS access

SEV C

Club Name: South East Valley Atari Connection
 Acronym: SEVAC
 Address: PO Box 662, Chandler, AZ 85224
 Meetings: Eaton Business Park, 3234 S. Fair Lane, just off 48th St. & Southern, Tempe, AZ
 Day: 3rd Saturday
 Time: 10AM
 Dues: \$12
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Marc Dyer (602) 897-0314



Club Name: Southcentral Pennsylvania ACE
 Acronym: SPACE
 Address: PO Box 11446, Harrisburg, PA 17108
 Meetings: Camp Hill Mall Community Room
 Day: 3rd Monday
 Time: 7:30PM
 Founded: 1982
 Dues: \$15/yr
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: John Slade (717) 938-3656
 Benefits: SPACE Probes newsletter

SST

Club Name: Sacramento ST User Group
 Acronym: SST
 Address: PO Box 214892, Sacramento, CA 95821
 Meetings: Pac Bell Auditorium, 2700 Watt Ave.
 Day: 2nd Wednesday
 Time: 7PM
 Dues: \$24/yr
 System(s): ST/Mega/TT
 Contact: Mark Warner (916) 344-8320
 BBS #s: ST-Keep - (916) 331-6153, (916) 729-2968
 Benefits: Club newsletter, free raffle ticket at each general meeting, membership disk



Club Name: Saginaw/Tri-Cities Atari User Group
 Acronym: STAG
 Address: 4765 N. Eastman Rd., Midland, MI 48640
 Meetings: Rudy Zauel Memorial Library, corner of Center and Shattuck in Saginaw Township.
 Day: 2nd Saturday
 Time: 9AM
 Founded: Sept. 1983
 Dues: \$20/yr
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Bryant LaFreniere (517) 835-2234
 Benefits: Free PD disk with membership/renewal, PD disks are \$3 or 2 for \$5. Participates in Community Fair at Fashion Square Mall each January



Club Name: ST Atari North Coast Enthusiasts
 Acronym: STANCE
 Address: 1174 Larkspur Dr., Lyndhurst, OH 44124
 Meetings: B&G Electronics, 15729 Madison Ave., Lakewood, OH.
 Day: 3rd Monday
 Time: 7:15PM
 Dues: \$12/yr with one time sign up fee of \$13
 System(s): ST/Mega/TT
 Contact: Joseph Adato (216) 449-6881

ST☆R

Club Name: ST Atari Resource
 Acronym: STAR
 Address: 329 Sumter Drive, Belleville, IL 62221
 Meetings: Illinois Power Bldg., 1050 West Blvd., Belleville, IL
 Day: Last Monday
 Time: 7PM
 Founded: July 1988
 Dues: \$15/yr
 System(s): ST/Mega/TT
 Contact: Dennis Guthrie (618) 235-7871

STAR

Club Name: ST Atlanta Roundtable
Acronym: STAR
Address: 3069 N. Brook Rd., Chamblee, GA 30341
Day: 3rd Monday
Founded: 1987
Dues: \$30/yr
System(s): ST/Mega/TT
Contact: Rick Ostapow (404) 487-4845



Club Name: STARgroup
Acronym: STARgroup
Address: 2312 Ironstone Dr. E., Jacksonville, FL 32216
Meetings: La Miranda Apartments off Powers Ave., Jacksonville, FL.
Day: 1st and 3rd Tuesday
Founded: May 1990
Dues: \$15/yr
System(s): ST/Mega/TT, Macintosh and Portfolio
Contact: S. Michael Hallack (904) 646-0567
BBS #s: Lief's World - (904) 573-0734
Benefits: Free PD/Shareware disk library access, quarterly newsletter.

STAR Atari Road Runners

THE #1 ATARI USER GROUP IN THE NEW HAVEN (CT) AREA

Club Name: ST Atari Road Runners
Acronym: STARR
Address: 15 John St., Ansonia, CT 06401
Meetings: Greater New Haven State Tech. College, 88 Bassett Rd., North Haven, CT.
Day: 3rd Thursday (except August)
Dues: \$20/yr
System(s): ST/Mega/TT
Contact: Madelon Wilson (203) 735-6711
BBS #s: (203) 421-4861



Club Name: ST Users Network
Acronym: STUN
Address: PO Box 27285, Salt Lake City, UT 84127
Meetings: Murry High School
Day: 3rd Wednesday
Time: 7PM
System(s): ST/Mega/TT
Contact: Randy Larsen (801) 967-0209
BBS #s: The Bolt - (801) 968-3921

Salinas Valley Atari Computer Enthusiasts

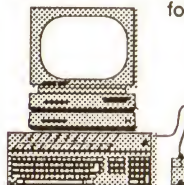
Club Name: Salinas Valley ACE
Acronym: SVACE
Address: 672 Romie Lane, Salinas, CA 93901
Meetings: Salinas Community Center
Day: 1st Tuesday
Time: 7:30PM
Dues: \$12/yr
System(s): Atari 8-bit and ST/Mega/TT
Contact: Gary Klugman (408) 758-4894
BBS #s: BitStream - (408) 449-2150
Benefits: Raffles



Club Name: Southwest Washington Atari Group
Acronym: SWAG
Address: PO Box 1515, Vancouver, WA 98668
Meetings: Clark County Fire District #5, Station 3 on 213 NE 120th, Vancouver, WA.
Day: Last Sunday (except July)
Time: 6:30PM
Dues: \$12/yr
System(s): Atari 8-bit and ST/Mega/TT
Contact: Allan Coker
BBS #s: Bear Cavern - (206) 574-1146



Club Name: Tinker ACE
Acronym: TACE
Address: 16564 SE 18th, Choctaw, OK 73020
Meetings: Moore Public Library, 225 S. Howard, just off SW 4th and I-35, Moore, OK.
Day: 1st Saturday
Time: 1PM
Founded: 1982
Dues: \$15 family, \$7 correspondence (July renewal)
System(s): Atari 8-bit and ST/Mega/TT
Contact: Ron Hamilton (405) 387-5649
BBS #s: TACE BBS - (405) 366-1977
Benefits: Will mail copies of AtariUser magazine to individuals for approx. \$1 per issue.



TASTE

Club Name: Thunder Bay Atari ST Enthusiasts
Acronym: TASTE
Address: 185 Varsity Row, Thunder Bay, Ontario P7B 5P2

CANADA
 Founded: October 1987
 Dues: \$25/yr Canadian
 System(s): ST/Mega/TT
 Contact: Neville Denetto

Founded: April 1982
 Dues: \$25 Canadian
 System(s): Atari 8-bit and ST/Mega/TT
 Contact: Brian Cassidy (519) 966-0305



TEAC

The Educator's Atari Club

Acronym: TEAC

Address: PO Box 1024, Laytonville, CA 95454

Meetings: Operates by mail, members are spread all over the world.

Founded: 1986

Dues: \$25/yr

System(s): Atari 8-bit and ST/Mega/TT

Contact: Pete Loeser (707) 984-8048

WACO



Club Name: Westmoreland Atari Computer Organization

Acronym: WACO

Address: 230 Clairmont St., North Huntingdon, PA 15642

Meetings: North Huntingdon Town House, near Irwin, PA.

Day: 2nd Tuesday

Founded: December 1983

Dues: \$20 individual, \$24 family

System(s): Atari 8-bit and ST/Mega/TT

Contact: Patty Marshall (412) 225-8637

Benefits: Participates in many Atarifests in the northeast.



Club Name: Washtenaw AUG

Acronym: WAUG

Address: 42047 Hanford, Canton, MI 48187

Meetings: Michigan Student Union on State St. at the corner of S. University in Ann Arbor.

Day: 2nd Tuesday

Time: 7:30PM

Dues: \$15/yr

System(s): Atari 8-bit and ST/Mega/TT

Contact: Craig Harvey (313) 971-8576

BBS #s: MOLin's Den - (313) 451-0524

Benefits: Monthly 8-bit and ST raffle, free ticket for members.



Windsor Atari Users' Group

Club Name: Windsor AUG

Acronym: WAUG

Address: 3199 McKay Ave., Windsor, Ontario N9E 2R4
CANADA

Meetings: Roseville Gardens Community Centre, 6500 Roseville Garden Dr., Windsor, Ontario, Canada.

Day: 3rd Thursday Sept-June, except Dec. (2nd Thursday)

Time: 7:30PM



WNYAUG

Club Name: Western NY AUG

Acronym: WNYAUG

Address: PO Box 59, Buffalo, NY 14216

Meetings: Room 116E, Bacon Hall, State University College of Buffalo, 1300 Elmwood Ave.

Day: 1st Thursday

Time: 7:30PM

Dues: \$15/yr new, \$12/yr renewal

System(s): Atari 8-bit

Contact: Mike Husband (716) 825-8486

BBS #s: Wizard's Attic - (716) 681-1654

Benefits: POKEY newsletter disk

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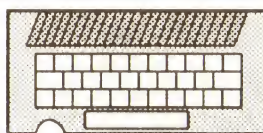
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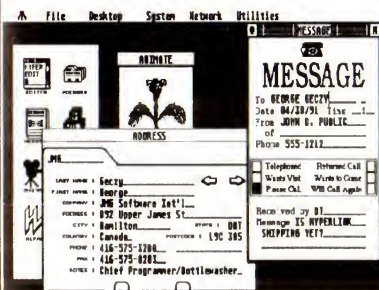
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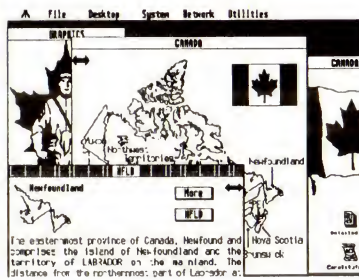
Example # 4 : Relational DBase



As a simple example of a Relational DataBase, HyperLINK can be set up to "link" any given field in a database with a field in another data-

base. In the Message HAP for instance, there is a link to the Address HAP and HyperLINK performs a search for a matching record.

Example # 1 : The Canada HAP



One of the most popular, and common uses for any Multi Media product is Education. The Canada HAP illustrated here, is an example of

how Text, Data, Graphics, and Sound can be combined for an interactive educational tool. eg. Click on a Province get a text file on that Province etc.

Watch for more example HAPs (HyperLINK Applications) to further show the unlimited power and flexibility of HyperLINK !!!

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JMG Software International, Inc
892 Upper James Street
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(416) 575-3201

This small butterfly is unremarkable. The others are a new species you can breed on your Atari computer. Automatic vectoring has arrived.



To the left is a pixel-based .IMG picture. In other words, the picture is made up of dots. It's a 58k file. The image can't be enlarged much more than this without the ragged edges showing. (In fact, they're showing already.)

To the right is a snapshot of the same image after it has been vectorized. It is no longer made up of dots. It now consists of lines and bézier curves. This only took a few minutes and Avant Vector did ALL the work for you.



AVANT VECTOR

Avant Vector is a cutting-edge graphics tool that's fast, easy to use and surprisingly versatile.

The large butterfly wing on the right is a vector image created by Avant Vector. Using "automatic tracing," a bit image graphic (the smaller butterfly) was converted to a vector graphic, resulting in the smooth output you see here.

Vector graphics have big advantages over bit image graphics - they make much smaller files, and they can be scaled to any size without losing resolution or looking blocky. And Avant Vector's tracing routines are highly sophisticated; in a recent review of 7 Mac, PC, and ST auto-tracing programs, Avant Vector was rated best of the bunch! This means there's less editing after tracing an image, and you get more work done in a shorter time.

Avant Vector supports .PI3, .PC3, .IMG, .BLD, .PIC or .PAC formats. You can trace

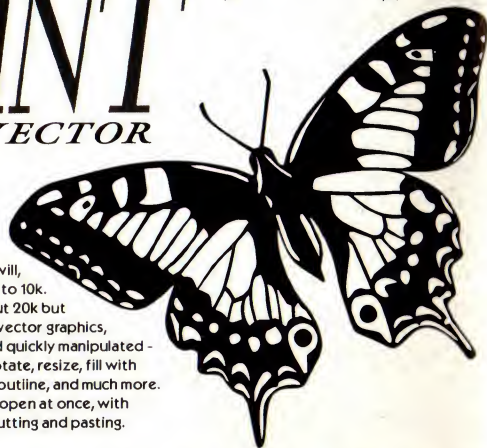
Mac, PC or Amiga graphics, in .TIF, .IMG or .IFF formats. The plotter version (Avant Plot) can also load and save HP plotter files, and sports a full range of plotting, drawing and cutting options.

Avant Vector can create .CVG files for Outline or Calamus, and .GEM files for use in programs that support the GEM3 format. And Avant Vector's ability to load and save Encapsulated PostScript brings the entire world of EPS graphics to the Atari ST and TT at last!

Since Avant Vector is a full featured vector graphics package, you can touch up a picture you've traced, or draw pictures from scratch - with an intuitive, speedy interface you'll learn in a matter of minutes!

Call or write CodeHead Software for more information about Avant Vector (and its amazing cousin, Repro Studio). Special introductory pricing is available until December 31, 1991. Act now and save!

This is the .CVG vector version: It can now be enlarged or reduced at will, and the file size is down to 10k. The .GEM version is about 20k but otherwise identical. As vector graphics, the images are easily and quickly manipulated - you can stretch, skew, rotate, resize, fill with gray scale percentages, outline, and much more. Up to 7 windows can be open at once, with clipboard features for cutting and pasting.



CODEHEAD SOFTWARE

P.O. Box 74090 • Los Angeles, CA 90004 • (213) 386-5735 • fax (213) 386-5789

MEGA PAINT Professional

If Van Gogh were alive today...

...he'd probably be creating his latest masterpieces with MegaPaint Professional, the brand new graphics powerhouse from CodeHead Software!

MegaPaint Professional is an amazingly full-featured combination bit-map and vector graphics tool for Atari ST and TT computers. That's right, both types of graphics in one program! Here's a partial list of its features (and this list barely scratches the surface):

- ★ Virtually any drawing function imaginable is available, making a complete listing impractical here. Besides the normal tools, there are such obscure features as rhomboid, equilateral polygons with 3 to 32 sides, circular or elliptical ringsectors, dropping perpendicular lines, or parallel lines...all available in either bit-map or vector graphics.

- ★ Extensive text support, including bit-mapped and vector fonts, as well as support for the vast Signum font library. You can easily create your own fonts or symbol tables from any graphics block.

- ★ Vector graphics can be projected into a bit-map picture and bit-map graphics can be faded into a vector picture, giving you unique flexibility when working with any type of graphics.

- ★ Whether working with bit-map graphics, vector graphics, or text, the user interface and features are tuned to give you the power and ease of use you expect from a CodeHead product.

- ★ Coordinate systems and even screen aspect ratios can be adjusted.

- ★ FAST block and lasso functions.

- ★ Editable fill patterns and line styles.

- ★ Up to four planes of color separation may be manipulated, overlaid, viewed with varied intensities, and printed to a color printer.

- ★ There are 197 dropdown menu selections and 377 submenu dropdown selections! Unique overlapping pop-up menus give you 120 selectable icons.

- ★ MegaPaint can be used with virtually all printers. Supplied printer drivers can be easily edited to adapt to any printer.

- ★ Pictures can be loaded in MegaPaint's .BLD format, standard .IMG format, MS-DOS .PCX format, Degas, straight 32K format, or STAD format (.PAC). Vector graphics can be exported in CVG format.

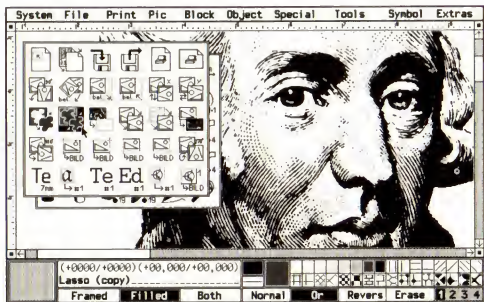
- ★ MegaPaint can call external modules, allowing infinite expandability for new functions. Import modules are already in the works for several other picture formats.

- ★ Runs on any ST/TT with a monochrome monitor from 640x400 up to 8192x8192.

- ★ Virtual page size may be as large as 7680x7680. Pictures may be loaded into any area of the virtual page.

- ★ MegaPaint has network support.

- ★ Scanner support currently includes interfaces for 3 different scanners. External module support allows the future interfacing of any other scanner.



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